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**PERFORMANCE EVALUATION SYSTEMS OF U.K. MULTINATIONALS
AND HOST COUNTRY ENVIRONMENTAL INFLUENCES**

by

© Miguel J. P. Athayde Marques

A thesis submitted for the degree of Doctor of Philosophy

**UNIVERSITY OF GLASGOW
School of Financial Studies**

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In loving memory
of my father

and

To my mother

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ABSTRACT

This study examines the foreign subsidiary performance evaluation and control systems in operation in multinational corporations (MNCs), with a view to determining the extent and ways in which the influences of host country environments are taken into account in the evaluation of operations and managers. Additionally, the study attempts to determine the profile of the multinationals which employ systems that are sensitive to the environment.

In general, the foreign subsidiary performance evaluation and control process is known to have an important impact on the international allocation of company resources. This fact has relevant implications for a number of actors in the multinational scene: for corporations, since it is through the exercise of control and the close monitoring of the subunits' performance that the integration of foreign operations is coherently achieved with the overall corporate strategy; for managers responsible for the subsidiaries, since the outcome of the assessment process normally generates decisions concerning promotion and supplemental compensation of the local management; and for host nations, since the evaluation process provides indications that may lead the multinationals to increase their local investments in some countries and to divest from others.

Environmental recognition in the performance assessment of foreign operations is considered, in particular, to be a vital element of the evaluation and control process in MNCs. This is so due to a number of reasons which have to do first with the application of certain conditions necessary for the accomplishment of an equitable and effective assessment, and second with the internal organization of multinationals, their strategy, and the nature of their activities which may render them particularly vulnerable to host country environmental influences.

From the review of the literature, a predominantly deductive mode was chosen, and a set of hypotheses was generated. Data for the research were collected with the help of a questionnaire mailed to the 210 British-based MNCs that form part of the 500 largest industrial companies in the United Kingdom. The overall response rate to the survey amounted to 82 percent. In total, 101 corporations participated in the study which corresponds to a success rate of 48 percent. Further to the questionnaire, in-depth interviews with company senior executives were conducted.

The study involved a detailed examination of the formal reporting channels operated between subsidiaries and headquarters, and of the methods and criteria employed in the assessment of foreign operations. A major finding of the research is that in the majority of companies the formal assessment criteria used for foreign subsidiaries and their managers are at least moderately capable of taking host country environmental influences into account. A comparison of this finding with the scarce evidence available from American studies, suggests that the performance evaluation systems used in British MNCs tend to be more sensitive to the environment than those in operation in U.S. multinationals. Despite this intrinsic capability of the systems used, headquarters executives generally believed that formal evaluation criteria should reflect environmental influences to an even greater extent than they actually do. Considering that headquarters executives normally viewed their systems as extensively reflecting the environment, it appears that their requirements in this respect are extremely high. This may be interpreted as an indication of the importance of the environmental issue for those who in practice are involved in the evaluation and control of foreign operations.

Multinationals that are largely involved in operating overseas, and whose activities can be seriously affected by changes in host country conditions were found to use methods of performance assessment that take more extensive account of the local environmental situation. In effect, firms with a higher commitment to foreign operations, higher internationalization levels, and a higher exposure to host country and government influences employ evaluation systems that tend to be more sensitive to the environment. Also, companies which have an environmental scanning activity institutionalized at headquarters, tend to employ evaluation systems that are more environmentally sensitive.

Besides analysing the formal criteria used in the assessment of foreign operations, the study also examines the role of informal information in the performance evaluation process. Generally, the amount of information retrieved outside the formal communication network and used in performance assessment was found to be very substantial. Contrary to expectations based on theory, the study appears to indicate that information is collected informally mainly to complement the formal evaluation systems and to enhance their capabilities and strengths, rather than to serve as a substitute for them.

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CHAPTER 1 - INTRODUCTION

1.1. The Context of the Study

The rapid growth of business activities across national boundaries experienced by corporations in recent years has raised interest in a number of problems that have become important challenges to the business and academic communities of today. One such problem area is the performance evaluation of subsidiaries and managers acting in an international network of operations. This constitutes a critical issue in the control function of multinational corporations (MNCs).

In general, the control and evaluation of performance of organizational subunits is an activity essential to the coordination of the geographically dispersed activities of a multinational, which further contributes to the achievement of a coherent integration of operations with the overall strategy of the company [e.g. Prahalad and Doz, 1981]. Moreover, the control and evaluation process has a relevant impact on the allocation of economic, financial, technological, and human resources among the various subsidiaries of a firm on a worldwide basis [e.g. Shapiro, 1978]. Decisions such as those concerning promotion and supplemental compensation of subsidiary managers, and those leading either to additional investment in or divestment from countries where companies had chosen to invest are believed to be strongly influenced by indications provided by the performance evaluation systems operated in the companies. For these reasons, the evaluation and control process in MNCs has implications that are relevant not only to the corporations themselves but also to the countries which are the recipient of the investments.

1.1.1. The Importance of Environmental Consideration in Foreign Subsidiary Performance Evaluation and Control

Like any organization, the MNC is open to its external environment, being subject to the impact of environmental characteristics upon its activities, and having to react to such characteristics by adopting adequate courses of action. In fact, no organization exists in isolation from its external environment. Instead, organizations are affected by the impact of a complex sociological - cultural - political - legal - economic whole which influences their performance and frames their activities.

However, the MNC is distinct from any other type of organization insofar as the external environment presents particularly high levels of variability. These levels of variability stem from the crossing of national borders for, as the name suggests, the distinctive characteristic of the MNC is that operations are spread over different countries often covering separate geographic areas around the world.

When corporate activities cross home boundaries and become international, the company no longer faces a relatively uniform set of environmental characteristics such as a sole currency, a common language, a collective political and legal system, and a similar economic and cultural structure. In reality, the company is subject to wide ranging environmental frameworks that vary in accordance to the number and nature of the host countries operated. Each environmental framework poses particular threats and opportunities which will eventually affect the performance of the subsidiaries of the MNC.

Many are the environmental factors impinging on subsidiaries' activities, their relative power in influencing subsidiaries' performance varying from host country to host country. Examples of such factors are import-export controls imposed over a subsidiary by local regulations, rates of inflation, exchange controls, consumer market mobility, production-factors costs, demands made on companies

by host country legislation (e.g. equitable pricing policies for international and intra-company sales or transfer prices, inclusion of research and product development in subsidiaries, retaining of earnings for subsidiary growth, realization of subsidiary's operating potential through expansion plans developed in the subsidiary rather than in company's headquarters), tax structures, organization of capital markets, political instability, cultural backgrounds, educational levels of the nationals, social unrest, and quality of labour relations with management. In general, the various external environmental factors may be grouped into two major classes: economic, and non-economic, the latter including political, legal, and socio-cultural dimensions [e.g. Farmer and Richman, 1965; Brooke and Remmers, 1972; Glueck, 1976].

The recognition of the environmental factors that influence subsidiaries' operations and which are particularly relevant in performance determination is critical to the exercise of the control function in MNCs, for two main reasons. One proceeds from the application of the concept of responsibility accounting, and in particular of the principle of authority and controllability to the evaluation process. According to this principle, resources employed in an organizational subunit (inputs) and results produced (outputs) should be under the effective authority and control of the managers responsible for the subunits [e.g. Miller, 1982; Horngren, 1982]. Considering that each foreign subsidiary of a MNC is subject to a particular set of environmental conditions that affect its operations, it becomes apparent that in order to achieve a fair and competent assessment of the subsidiary management, executives in headquarters ought to comprehend the specificity of each host country environment. Moreover, the understanding of the particular environmental conditions faced locally is believed to contribute to a better appreciation of the potential of each subsidiary. This has important implications not only for the ongoing control of the subsidiary operating performance but also for the future allocation of resources and the implementation of corporate strategy.

The other main reason justifying the need for the recognition of the environmental impact on foreign operations is related to the

vulnerability of certain MNCs to unexpected changes in the characteristics of the host environments. Such a vulnerability may be due to different causes, often arising from the way in which the international industrial strategy of the multinational is organized, and the type of business in which the company is in. As to the former, different sources [e.g. Channon, 1979; Davidson, 1982; Stopford and Turner, 1985] note that nowadays MNCs are tending to a global organization of their activities where coordination of operations is built around an integrated global strategy which seeks to realize fully the synergistic potential of the total multi-national system of operations. This type of strategy requires a very close control exercised by headquarters, and as a result subsidiaries can no longer maintain relatively high levels of independence. On the contrary, all main subsidiaries of a corporation interact in a complex network of mutual relationships under the logic of an overall plan of action superimposed centrally. In this context, the failure of one single operation has a much more serious impact on the whole of the company than otherwise would have if the subsidiaries were relatively independent of each other. It becomes, therefore, vital that headquarters managers responsible for the evaluation and control of subsidiaries are capable of understanding the dynamic nature of the host country environments and also how the environment may affect operations. Only in this way can future changes be anticipated and corrective actions be taken in a timely manner.

High vulnerability of a MNC to the environment does not stem solely from strategies of global integration. In fact, companies that adopt an opposite strategy of nation-for-nation segmentation may also be highly vulnerable to the foreign subsidiary environmental situation. These are cases of multinationals that, due to the nature of their business, are subject to high levels of exposure to host country and government influence. In industries such as telecommunications, natural resources, and heavy engineering, which are of particular strategic importance to host nations, or whose main clients are either governments or state owned enterprises, MNCs tend to be more vulnerable to local conditions [Doz, 1980]. In such cases, it is also essential that the evaluation and control of subsidiaries is able to understand and follow the peculiarities of the host environments.

There seems to be an increasing interest on the part of MNCs in the identification of influences exerted by local environmental conditions upon overseas activities. An indication of this is the growing spread of an environmental assessment activity among multinationals. Recent studies reporting on American MNCs revealed that the collection and analysis of foreign environmental information is rapidly emerging as a new managerial function located in multinationals' headquarters [Kobrin et al., 1980; Kennedy, 1984]. Although in the vast majority of the cases the information generated by this function is almost exclusively used in initial investment decisions and strategic planning, it is conceivable that companies will eventually employ the information in the subsidiary evaluation and control process as well.

The realization of the importance of the environmental impact on multinationals has led authors to call for a rethinking of many well established conventions in both management theory and practice. For example, Ringbakk [1976] argues:

"While corporate planning in the past was market-based and concerned with growth and profitability in terms such as return on investment or assets, planning in the years ahead will have to be much more politically oriented and sensitive to societal and national priorities. To live up to these challenges, international executives and enterprises will have to display increasing corporate flexibility, entrepreneurship, contingencies, and above all corporate statesmanship. To accomplish this, [...] we need to assess past conventions and practices in the light of the emergent forces for change." [p.9, emphasis added]

This new approach should not be applied only to the areas of strategic planning and general management, but to all facets of corporate activity. In the particular case of foreign subsidiary evaluation and control, it seems that no common yardstick is adequate for the totality of the international activities of the company. Instead of superimposing uniform techniques of assessment, and a companywide battery of standards, multinationals should rather implement flexible performance evaluation systems that can capture the specificity of each subsidiary and take the particular characteristics of the local environments into account.

1.1.2. The Purpose of the Study

The purpose of the present study is to investigate the ways in and the extent to which environmental characteristics - both economic and non-economic - external to foreign subsidiaries of MNCs are taken into account in the evaluation and control systems employed in the assessment of subsidiaries and their managers.

The study intends to generate testable hypotheses which will be based on an operational model drawn from the literature, being described in chapter 7. Briefly, this model establishes that the characteristics of the control and evaluation systems used by MNCs for foreign operations, and consequently the capability of the systems to take environmental influences into account, may vary from company to company according to some selected corporate features. Such features include, among others, the international strategy of the MNC, its exposure to host country and government influence, its main industry and size, and its commitment to foreign operations and level of internationalization. The investigation of the significance of these corporate characteristics in possibly explaining differences in companies' practices is considered to be an important object of the research.

The study will focus on British-based MNCs for a number of reasons. Firstly, the U.K. constitutes the most convenient universe of analysis due to the geographic positioning of the researcher. Secondly, there is a noticeable scarcity of information on the practices of multinationals originated from the U.K., especially if compared with the amount of information available on American MNCs. Thirdly, and most important, Britain has a very prominent role as a country from where foreign direct investment is originated. This latter point will be further explained.

Historically, the United Kingdom has for more than a century been a strong source of multinational enterprises. As Dunning [1985] points out, the direct international involvement of British companies can be traced back to the nineteenth century, this making the U.K. the nation

with the largest experience as a foreign direct investor. Nowadays, the overseas investments of British companies are only second to those of U.S. multinationals, and amount to volumes that are twice as high as the total foreign investment of competing economies. In fact, in the beginning of the eighties the stock of direct investment abroad owned by British MNCs was about 14 percent of the world total, as compared with 42 percent for the United States which holds the top position, and an individual share in the region of 7 percent for a group of countries that immediately follow the U.K.: Netherlands, West Germany, Japan, and Switzerland [see Stopford and Dunning, 1983, ch.1]. Considering that in the past decade British MNCs have been able to hold reasonably well to their second place position, Stopford and Turner [1985] remark that the well publicized problems of unemployment, slow growth, and de-industrialization that afflict the British economy do not seem to have greatly upset the thrust of the U.K. multinational business. As Stopford and Turner [ibid., p.8] observe: **"British multinationals therefore seem to be rather more resilient than the underlying health of the parent British economy might have suggested."**

Another important characteristic of U.K.-based MNCs, with relevant implications for the present study, is related to the geographical spread of the businesses. It is a well known fact that the international expansion of British companies was in the beginning closely focused on the so-called "Empire" and later on the Commonwealth. In the past 25 years, however, British companies started expanding more rapidly first in Europe and then in the United States, while maintaining their presence already acquired in other regions of the globe [Stopford and Turner, 1985]. As a consequence, MNCs from the U.K. tend to have a wide geographical spread which serves the purpose of the present study. In effect, the environmental issue in foreign subsidiary performance evaluation is considered to be of particular relevance for multinationals that are subject to a large variation in host country environmental influences.

1.1.3. Previous Research

Consideration of the environment in performance assessment is an issue that has not been properly addressed in the literature. In reality, the theory has so far generally overlooked the importance of the recognition of the environmental impact on operations in the foreign subsidiary evaluation and control process. Also, empirical studies on the criteria employed by MNCs to assess the performance of foreign operations have not undertaken the examination of the environmental issue in a satisfactory manner.

A number of studies, all focusing on U.S.-based MNCs [Mauriel, 1969; McInnes, 1971; Bursk et al., 1971; Robbins and Stobaugh, 1973a and 1973b; Persen and Van Lessig, 1979; Morsicato, 1980; Choi, Czechowicz and Bavishi, 1982; and Yunker, 1983], have attempted to describe the techniques employed by corporations in the evaluation of foreign subsidiaries and managers. However, none of them was specifically designed to explore the extent to which host country environmental factors are allowed for in the performance evaluation activity.

From such studies a general picture of the internal evaluation and control systems employed in multinationals has emerged. In general, the studies are consistent in reporting a number of characteristics commonly found in practice, namely: 1) the existence of insignificant differences both in the design and in the use of evaluation systems for foreign and domestic operations; 2) the application of identical evaluation criteria to all the foreign subsidiaries of a company; 3) the use of the same evaluation techniques in the assessment of subsidiaries and managers; and 4) a tendency for headquarters to rely strongly on profit-based measures mainly on the rate of return on investment (ROI) as the key indicators of foreign subsidiary performance.

Given these characteristics, one may wonder how MNCs are able to cope with the diversity of conditions present in their network of international operations when it comes to evaluate the performance of subsidiaries and managers. In effect, from the findings just

summarized it appears that the consideration of the specificity of each subsidiary is extremely difficult to achieve with the systems currently in operation. Furthermore, it seems in particular that environmental influences peculiar to individual operations are not adequately being taken into account by the performance evaluation systems. This was the conclusion of one of the studies mentioned above, which to some extent addressed the environmental issue [Morsicato, 1980]. It was suggested in Morsicato's study that firms were not systematically designing performance evaluation systems that recognized environmental differences. In effect it was found that:

"[...] if the geographic area is taken separately, the operating environment does not affect either the actual or preferred policy towards developing a system of performance evaluation which reflects environmental differences." [ibid., p.93]

The body of empirical evidence accumulated by the studies on foreign subsidiary performance evaluation relates almost exclusively to American MNCs. This being so, little is known as to equivalent practices of multinationals from Britain and other countries. Indeed, there is reason to believe that the techniques and processes employed in U.K.-based MNCs differ from those used by their American counterparts. If for U.S. MNCs one may suspect, in the light of the incomplete evidence available, that the performance evaluation criteria in use are generally not sensitive to the varying influences of the host country environments, for U.K. multinationals the situation may well be different. Endorsing this view is a study by Negandhi and Baliga [1979] which suggests that in contrast to the typical American multinational's concentration on profits, European and Japanese corporations consider other, less tangible, factors such as the maintenance of harmonious relations with host government officials and other influential people in the countries where the subsidiaries operate.

The answer to questions concerning the environmental issue in performance evaluation, not only in terms of the actual capability of the systems operated by MNCs but also as regards the ways in which the environment can conceptually be taken into account, requires additional research. It is believed that such research should cover

certain areas and topics which have been absent in past studies. One area refers to the formal reporting system operated between subsidiaries and headquarters which produces a strong flow of information regularly submitted to executives in the parent company. This reporting system has been overlooked in most studies on foreign subsidiary performance evaluation, and yet the information that it generates is bound to play an important role in the assessment process (for example, it is evident from Leksell [1981] that the internal reporting system in multinationals is a key element in the control of international activities).

Another aspect often deficiently addressed in studies is the set of measures and standards employed in the evaluation of operations. In effect, there has been an unbalanced emphasis on financial, and mainly profit-based, indicators of performance, which has led to a scant consideration in the analysis of the extent of use of non-financial and qualitative indicators. As can be inferred from Kaplan [1983], the importance of indicators of a non-financial nature to the monitoring of organizational performance is paramount.

Another area frequently absent in past research is the informal dimension in performance evaluation. Robbins and Stobaugh [1973a] pioneered the idea that beyond the formal criteria of performance evaluation there might well be an informal assessment which may compensate for some of the flaws of the formal systems. And they referred to a few procedures used in practice to supplement formal information, such as personal visits to locations and rules-of-thumb employed to differentiate subsidiaries according to their specificity. Informal accounting information systems in general were found to constitute a widespread and well-established practice in business [Clancy and Collins, 1979]. However, no one is known to have attempted to determine the precise role of informal information in the multinational performance evaluation process.

Besides all these areas requiring to be covered, it is believed that a study addressing the environmental issue in performance evaluation should also investigate whether an environmental scanning activity exists centrally located in companies. As mentioned earlier in the

chapter, the collection and analysis of foreign environmental information was found by a number of studies to be essential in making strategic decisions. However, it is expected that this information is equally employed in performance evaluation. If this is confirmed, it becomes apparent that the determination of the function and locus of the environmental scanning activity represents a relevant aspect for the study of the environmental issue in foreign subsidiary performance evaluation.

In summary, from what has been discussed in this section two points stand out as most relevant. One concerns the importance of taking into account in the performance evaluation and control process of MNCs, the particular host country environmental conditions encountered by subsidiaries in each geographic region operated. The other relates to the absence of research done in this area so far. Quite significantly, in a recent review article by Schoenfeld [1981] where the present state of knowledge in the field of international accounting is surveyed, these two points are strongly emphasized. As the author states:

"[...] results of operations [in MNCs] are influenced by a large number of local variables that require individual monitoring and interpretation. [...] Existing and increasing degrees of decentralization and operational diversity of foreign subsidiaries (induced partially by growing nationalism), require detailed nonaggregate analysis of individual activities. To "environmentalize" performance analysis several approaches can be applied. Unfortunately, insufficient conceptual and empirical research is available at present; for example, few case descriptions of performance measurement exist and the policy differences between multinational enterprises from Europe, Japan, and the U.S. which suggest the need for different measurements have not been correlated with these actual approaches. [...] To reduce dangers of misinterpretation or inefficiencies, sufficient background information about local conditions must be incorporated explicitly into the information (accounting) system. This problem, though well known to MNE managers, has been largely neglected by scholars; research on cross-cultural loss of information or, conversely, additional information requirements is lacking in spite of the fact that it should be a prime target." [ibid., pp.92-93, emphasis added]

1.2. Research Questions and Expected Outcomes

Having defined the context of the research, the main empirical question that motivates the study asks:

How and to which extent are external environmental influences on foreign operations taken into account in the performance evaluation and control systems used in MNCs for subsidiaries and subsidiaries' managers?

The complexity of this question, derived from its broad scope and the nature of the issues involved, requires that a thorough analysis aiming at the characterization of the performance evaluation and control process in British MNCs be undertaken.

A first step which will place the use of foreign environmental information in its organizational and managerial context consists of studying the organization of the environmental scanning activity in MNCs. It is believed that this activity, when existing in companies' headquarters, may have important implications for the environmental capability of the evaluation and control systems employed. For this reason, the research will explore the ways in which host country environmental information is collected and analysed centrally in headquarters. It will also determine the extent of use of such an information in the foreign subsidiary evaluation process.

As explained earlier, the full understanding of subunit performance evaluation cannot be achieved without taking a close look at the formal reporting system in operation between subsidiaries and headquarters. The information reported via these formal channels of communication will be analysed with a view to determine its nature, and the way in which it is used in the assessment of subsidiaries and managers. After finding out which type of subsidiary information is generally at the disposal of headquarters managers, the study will concentrate on the characterization of the methods of assessment

employed. Particular attention will be given to the identification of certain key features inherent to the performance evaluation systems implemented in companies, such as: 1) the nature of the success indicators and standards used (i.e. whether they are quantitative or qualitative, financial or non-financial, and profit-based or non-profit-based); 2) the relative importance assigned by headquarters executives to each indicator employed; 3) the capability of the systems to allow for a distinction in the criteria used to evaluate the performance of operations and to assess that of managers; 4) the variability of success indicators and standards applied to subsidiaries with different characteristics.

From the analysis of features such as these, it is expected to be possible to construct an instrument that gives an indication of how sensitive to the host country environments are the performance evaluation systems in operation in the MNCs studied. This will provide an objective measurement of the actual environmental sensitivity of evaluation systems. Therefore, the instrument created in the study will have the advantage of being independent from the subjective perceptions of headquarters executives as to the level of environmental sensitivity possessed by the evaluation criteria utilized.

Having accomplished the objective defined by the research question above, the study will attempt to determine the profile of those MNCs that employ evaluation and control systems more sensitive to host country environmental influences. This leads to another research question which can be seen as a corollary of the previous one:

Which major characteristics of the MNCs are related to the degree to which the performance evaluation and control systems in operation take the environment into account?

It is hypothesized that evaluation systems showing higher degrees of sensitivity to the environment will be encountered in multinationals whose operations are particularly vulnerable to environmental influences as well as in companies whose size, organizational structure, and experience enable the utilization of more sophisticated

assessment practices. As to the vulnerability of MNCs to the environment, it is anticipated that firms with global integration strategies, high levels of exposure to host country influence, tight strategic control over subsidiaries, high levels of internationalization, and a high commitment to foreign operations will tend to employ evaluation and control systems that take more extensive account of the host environments.

The outcomes anticipated so far concern formally institutionalized evaluation and control practices. However, earlier in the chapter attention was drawn to the important role played by informal information in the performance evaluation process. The study will attempt to understand and define the extent of intervention of this informal dimension on the assessment of subsidiaries and managers of a MNC. In particular, it is expected that the less the formal systems account for environmental influences on foreign subsidiaries, the higher will be the volume of environmental information collected via informal methods, and incorporated, although not systematically, in subsidiary and managerial evaluation.

It is hoped that the answer to the research questions formulated here will contribute to a better knowledge of the problem of environmental recognition encountered in the assessment of foreign operations, and will generate solutions of value both to theory and practice.

1.3. Research Methodology

Due to the empirical nature of the study, the research employs survey methods to collect information about the practices followed in companies. The method of survey research, as it is used in the study, encompasses the dual task of description of corporate practices and exploration of inferential relationships between practices and certain independent variables, such as corporate characteristics.

The basic data on which descriptions and inferences are constructed is collected from a number of techniques, namely mail questionnaire, personal interview, and to a smaller extent archival search. The questionnaire is the pillar of the data collection in the study and all possible care was taken in its preparation, testing, and administration. The survey population to which the questionnaire was mailed was composed of all the U.K.-based multinationals among the 500 largest British industrial companies, included in the Times 1000 [1982-83] list (for a definition of multinational for purposes of selection of the survey population see chapter 8, section 8.3.1.). The administration of the questionnaire was followed-up by a reduced number of personal interviews conducted with questionnaire respondents. The interviews are a means to acquire in-depth information relating certain aspects of particular interest to the research. They are also a mechanism to check further the capability of the questionnaire in accurately describing companies' practices. The selection of firms for interview was judgemental, and attempted to cover a range of cases employing different practices in key issues of the research. Finally, the collection of relevant information for the study is complemented with archival search, notably from published annual company reports.

Survey research has the distinct advantage of enabling inferences to be made with respect to large populations from the selection of smaller samples. Such an inferential process is achieved with statistical techniques whose utilization is facilitated by the nature of the information collected. The present study employs a wide range of descriptive and inferential statistics which are hoped to give the investigation robust evidence, allowing the generalization of the results. Despite these advantages, critics of the survey research method built around the questionnaire instrument note that the information collected merely reflects the perceptions and beliefs of the respondents and not necessarily the reality. In order to overcome this limitation of the methodology, the questionnaire to be used in the study emphasized factual instead of opinion questions. In addition, methods to confirm independently the rigour of the information provided in the questionnaire were used.

As a final word, it should be noted that the main feature of this work is that of an exploratory empirical investigation, and as such it is not purposely developed in a normative way. In spite of this, the study attempts to generate insights into the process of foreign subsidiary performance evaluation and control which, it is hoped, will have relevant implications for the development of normative theory.

1.4. Outline of the Study

The study is organized into three major parts. The first reviews the literature relevant to the problem under investigation. The second part defines the research approach and its design and methodology. The third part reports the results of the empirical analysis undertaken, comments on the conclusions reached, and finally summarizes the main findings. An overview of the study with a brief introduction to each individual chapter is given here.

Part I is intended to provide the theoretical foundations of the study and to review previous research conducted in the area. It is divided into five chapters, as follows:

Chapter 2 provides the general theoretical context of the interaction between an enterprise and its external environment. Contributions from organization theory and comparative management theory to the understanding of the impact of the environment on organizational patterns and effectiveness are reviewed here. In addition, the chapter presents a model of environmental interaction which attempts to integrate these two bodies of theory.

Chapter 3 brings the conceptualization of the interaction of enterprise-environment to a more tangible level, centred upon the particular case of the MNC. It starts by presenting the multitude of environmental frameworks in international business, and then discusses the forms used by multinationals to respond to environmental threats

and opportunities while simultaneously matching their internal resource capabilities. This is the essence of corporate strategy, whose understanding is considered essential for the study of foreign subsidiary performance evaluation. The chapter ends with a discussion of the environmental scanning activity in MNCs.

Chapter 4 introduces the performance evaluation and control function in MNCs. It examines the essence of control in organizations in general, and discusses the formal performance evaluation process of foreign subsidiaries in particular. It also introduces the informal dimension in performance assessment, analysing the role of informal information in the headquarters-subsidiary relationship.

Chapter 5 focuses on the main instruments through which performance evaluation and control are normally exercised. Classic measures of divisional performance are reviewed with a discussion of their advantages and weaknesses, and special attention is given to the budget due to its important role as an integrated instrument of subunit performance evaluation. The chapter ends with an examination of the rationale for the use of non-financial and qualitative success indicators.

Chapter 6 surveys the available empirical evidence as regards the performance evaluation and control criteria employed in MNCs. Eight major studies spanning over a period of more than a decade are analysed, and their findings referred to the context of the present research.

Part II, dealing with the research approach and design, has two chapters:

Chapter 7 formulates the main problem to be investigated and presents a model of foreign subsidiary performance evaluation and control that operationalizes the theoretical concepts and issues reviewed in Part I. Additionally, the chapter generates the research hypotheses to be tested later, and defines the methodology to be adopted.

Chapter 8 discusses the data collection instruments employed. It explains the steps taken in the preparation and administration of the questionnaire, and in the organization of the follow-up interviews.

Part III, finally, presents the empirical side of the study. It is divided into the following six chapters:

Chapter 9 describes the characteristics of the research sample in terms of the independent or explanatory variables of the study. The concrete definition of these variables and the determination of the criteria employed for their measurement are also made here.

Chapter 10 examines the collection and analysis of foreign environmental information in the headquarters of MNCs. It reports first on the environmental scanning practices, and then presents findings on the relationships between such practices and corporate characteristics.

Chapter 11 describes the features of the internal reporting systems operated between foreign subsidiaries and group headquarters, and discusses the company characteristics associated with such features of the reporting systems.

Chapter 12 may be considered the central chapter of the empirical side of the study. It basically analyses the formal criteria used by headquarters in the evaluation and control of foreign subsidiaries and their managers, and determines the degree of environmental sensitivity possessed by the evaluation systems in operation. It also defines the profile of the MNC that is more likely to have host country environmental influences taken into account in the formal evaluation process. A by-product of this chapter is also the identification for each geographic area in the world of the environmental factors that are perceived in headquarters to have the greatest impact on subsidiaries' local activities.

Chapter 13 is the last chapter of results. It explores the use of informal information in foreign subsidiary evaluation and control, and attempts to discover whether the extent of reliance on informal

information by headquarters executives is associated with the relative weaknesses of the internal reporting systems and the evaluation criteria in general.

Finally, chapter 14 concludes the study by presenting an overview of its background and purpose, and by summarizing its main findings. After revealing some of the work's limitations, the chapter ends with a discussion of the major contributions of the study, and suggests directions for future research.

PART I

THEORETICAL FOUNDATIONS AND EVIDENCE FROM PREVIOUS STUDIES

CHAPTER 2 - THE INTERACTION BETWEEN ENTERPRISE AND ENVIRONMENT - THEORETICAL BACKGROUND

2.1. Introduction

It is generally accepted that no individual or organization can exist divorced from the external environment in which it is inserted. Despite the self-evident character of this assertion, only relatively recently have the influences of the external environment on the internal properties of an organization been systematically addressed in the literature. Two major streams of thought in the study of organizations, namely organization theory and cross-cultural comparative management, have contributed over the years to a better understanding of the impact of external environmental factors on organizational patterns and effectiveness.

These two bodies of theory are reviewed in the present chapter, as regards their contribution to the understanding of the interaction between organizations and environment. In addition, a model which attempts to reconcile and integrate the two approaches is presented in the final part of the chapter.

2.2. The Contribution from the Organization Theory

2.2.1. The General Systems Approach

In the literature on organization theory, the general systems approach, by drawing a distinction between open and closed systems, calls the attention for the vital importance of the environment in the study of complex entities.

The systems approach derives from the sciences of physics and biology and is inspired in the pioneering works of Koehler [1938], Angyal [1941], and above all Von Bertalanffy [1950]. Its underlying principle is based on the notion of system, which in its simplest form may be defined as **"a set of elements standing in interrelation among themselves and with the environment"** [Von Bertalanffy, 1972, p.417]. The different components in a given system ("subsystems") are conceptualized as interdependent elements whose relationships present some degree of stability, and which cannot be separated from the whole in a meaningful way [Kast and Rosenzweig, 1972]. The performance of the whole is not determined by the performance of each part considered independently but rather by the way in which the parts fit and work together [Ackoff, 1974, pp.13-15].

Conceived at a high level of abstraction, the general systems approach has attempted to establish an hierarchy of system complexity. Miller [1955] proposed a classification based on living systems which includes the cell, organ, organism, group, organization, society, and the supernational system. In a more comprehensive classification, suggested by Boulding [1956], nine categories were identified, namely frameworks (static structures), clockworks (simple dynamic systems), feed-back mechanisms (cybernetic systems), the cell (living systems), plants, animals, humans, social organizations (sociotechnical systems), and finally transcendental systems. Business enterprises, as Boulding observed, are placed at the level eight of complexity. As

sociotechnical systems, enterprises are regarded internally as a combination of human and non-human (or technical) resources, which transact, externally, with other groups and organizations (e.g. suppliers, customers, competitors, government, and public) for survival. These groups and organizations are part of a wide milieu which surrounds the organization affecting its operations. However, the relationships between the firm and the external environment are by no means passive. Dill [1958] proposed the concept of "task environment" to describe the external influences to which the organization is subject, and to which it responds through adaptive behaviour. In a more precise definition, the task environment consists of information inputs from external sources, which represent stimuli to which an organization is exposed. In this sense, the task environment differs from simple tasks and activities. According to Dill, when studying organizations one ought to distinguish between **"things that the organization does (activities), things that the organization sets itself to do (tasks), [and] stimuli that the organization might respond to (task environment)"** [ibid.,p.411].

The recognition of the existence of an important interface between organizations and their environments led to viewing business enterprises as open systems. This view holds that firms are non-self-sufficient entities which in order to survive have to engage in input-output transactions with other entities in their task environment. This view contrasts with the so-called closed systems approach, according to which organizations are regarded as self-sufficient, independent, closed units where problems are normally studied with reference only to the organizations' internal mechanisms. As Emery and Trist [1960] stated, **"thinking in terms of a closed system [...] allows most of [the] problems [of an organization] to be analysed with reference to its internal structure and, without reference to its external environment"** [p.281]. The closed systems approach represents, therefore, an "environment-free" thinking, as opposed to the open systems which involve an "environment-full" approach [Ackoff, 1974, ch.1]. Many organizational studies have adopted the restricted closed systems approach when they centred on the impact of certain internal variables such as size, leadership style and location on behaviour patterns, and organizational structure and effectiveness

[e.g. Caplow, 1957; Indik, 1963; Stogdill, 1965; Likert, 1967].

A characterization of the concept of open system, following the original writings of some of the leading theorists in systems thinking [Von Bertalanffy, 1950, 1950-51, 1962; Ashby, 1952; Boulding, 1956; Buckley, 1967; Zadeh and Polak, 1969; Ackoff, 1971; etc.] can be found for example in Kast and Rosenzweig [1972; 1985, ch.5] and Amey [1979]. In these comprehensive reviews the most important features of open and closed systems are first explained in the light of the laws of thermodynamics, and then meaningfully interpreted with reference to the business enterprise. In general, the distinctive characteristics of open systems include an inherent tendency to evolve towards greater complexity, the ability to reach a "steady-state" (or a stable dynamic equilibrium), and the capability of behaving "equifinally" (or to reach the same final state from different starting points via diverse pathways). The result is that open systems tend to be highly adaptive entities which change in conjunction with changes in the external environment. The more complex a system the more open to a wider range of environmental interchanges it is likely to be, thus making the system more subject to uncertainty, ambiguity and incongruence. Firms, as highly complex systems, experience a deep necessity to adapt and change, and at the same time to resist the forces which compel them into loss of identity and into disintegration. According to Amey [1979], it is through the exercise of control that companies are able to maintain a certain level of stability crucial to their existence. The role of control will be discussed in this context in chapter 4.

Many empirical studies in organization have attempted to incorporate the principles of the general systems theory. However, researchers have faced great difficulties in making the theory operational. The present state of knowledge, together with the difficult understanding of concepts which are only described at an abstract level, and on whose definition theorists sometimes disagree⁽¹⁾, all contribute to making the theory of very difficult practical application.

2.2.2. The Contingency Approach

In order to avoid such seemingly insurmountable difficulties, researchers/theorists on organizations have tried to develop an approach which utilizes some of the more salient attributes of the systems thinking, and which at the same time provides a feasible base for research applied to business enterprises. This approach led to the development of a contingency theory of organization which is a "midrange" view [Kast and Rosenzweig, 1972], **"somewhere between simplistic, specific principles and complex, vague notions"** [p.463]. It represents a step towards less abstraction, more explicit patterns of relationships, and more applicable theory [ibid.]. The contingency theory, term labelled by Lawrence and Lorsch [1967], has as a basic underlying assumption that organizational variables are in a complex interrelationship with one another and with characteristics of the environment [ibid., p.157]. When introducing their approach Lawrence and Lorsch wrote:

"Until very recently [...] organization researchers and theorists have tended to view the internal functioning of effective organizations as if there was one best way to organize. No attention was devoted to the problem [...] that different external conditions might require different organizational characteristics and behavior patterns within the effective organization". [ibid.,p.14]

The roots of the contingency approach can be found in the contributions to organization theory by a number of authors with a very diverse background. Such contributions span from the empirical studies of industrial sociologists such as Burns and Stalker [1959], and Woodward [1958, 1965] and the experimental designs of group communication networks of social psychologists such as Leavitt [1962], to the works on pre-industrial civilization of Udy [1959], a sociologist, and the history study of the evolution of large U.S. corporations by Chandler [1962]. All these studies culminated with the landmark empirical investigations of Lawrence and Lorsch [1967] and Lorsch and Allen [1973], and the conceptual works of Thompson [1967], and Galbraith [1973], which have greatly inspired a vigorous

stream of research conducted for more than a decade, reaching the present day.

Common to all this work is the notion that the pattern of internal states and processes developed by an effective organization are contingent upon the particular environmental conditions to which the organization is subject. For example, Burns and Stalker [1959] explored the relationship between internal management practices and two characteristics of the external environment - rate of change in technologies and markets. They found that in highly dynamic industries (the electronics industry) companies tended to be more effective when they placed lower emphasis on formal structure and had higher levels of interaction and communication among members around decisions (this was termed the "organic" pattern of management practice). In contrast, in relatively stable industries (the textile machinery industry), the more effective firms tended to use heavily formal structures and to adhere strictly to hierarchical positioning in decision making and information exchange (this was termed the "mechanistic" pattern).

Joan Woodward [1958] reported that effective organizations in different industries with different technological complexity could be consistently characterized by different organizational structures (i.e. different number of levels in the hierarchy, and different ratio of managers to hourly employees). Udy [1959] studied the compilation of anthropological descriptions of a very large number of non-industrial societies and found that the technological processes to which the organizations in these societies were subject had a distinct and persistent influence on the structure (authority, division of labour, solidarity, proprietorship) of the organizations. In his famous study on strategy and structure, Chandler [1962] after analysing the case histories of some of the major American companies concluded that new strategic choices made by corporations arose from environmental changes. The very development of strategic management was seen as a result of the awareness of the opportunities and needs to employ resources in a more profitable way in face of the changing characteristics of the population, income, and technology. The rate of environmental change (in technology, markets, and source of supply)

was to Chandler the phenomenon which creates the pressure in a company for strategic and subsequently structural modification.

Lawrence and Lorsch's [1967] influential study built on much of this previous research and developed a systematic set of concepts for understanding the relationships among functional units in large, single-product companies. The members of each unit (sales, production, and research) in an organization were found to develop a particularly strong orientation towards the specific goals, time horizons, interpersonal relationships, and formality of practices required by the respective sub-set of the organization's total environment (the market, the techno-economic, and the scientific environmental segments, or subenvironments). Differences in the three subenvironments were measured in terms of their respective degree of certainty, the scientific subenvironment being the least certain, and the techno-economic the most certain. By finding a consistent pattern of behaviour among unit members coping separately with three different levels of environmental uncertainty, Lawrence and Lorsch were able to conclude that organizational "differentiation" (differences between functional units in terms of the characteristics mentioned above) was related to the "diversity" in the environment (differences in the level of certainty in the various subenvironments). The authors studied the relationship between organizational differentiation and environmental diversity in three industries which presented different degrees of heterogeneity across subenvironments, and concluded that within each industry the more effective organizations tended to demonstrate a closer fit between their level of differentiation and the level of diversity of the environment. In other words, in effective companies the functional units tend to accommodate better to the demands of the corresponding subenvironments than in ineffective companies.

Lorsch and Allen [1973] extended the work of Lawrence and Lorsch [1967] from single-product organizations to multiproduct, multidivisional firms. They examined contingent relationships between environmental characteristics and internal practices at both the divisional and corporate headquarters level, having achieved findings that could be reconciled with those obtained by Lawrence and Lorsch.

Lorsch and Allen concluded that the degree of differentiation between each division and the corporate headquarters is contingent upon the demands posed by the division's industrial environment (characterized in terms of rate of change, time span of feedback, and key competitive variables), and the demands posed by the portion of the total environment that is salient to headquarters. They also concluded that higher divisional performance tended to be associated with the adequate level of differentiation required by the division's environment. Moreover, higher corporate performance was concluded to be associated with the adequate levels of corporate-divisional and interdivisional differentiation required by the company's total environment.

Two other studies, of a more theoretical nature, were also decisive in the contribution they brought to the understanding of the relationships between the enterprise and its environment. In one of these studies, Thompson [1967], organizations are viewed as open systems, permanently faced with uncertainty, but subject to criteria of rationality which demand certainty. The critical problem to organizations is hence to cope with uncertainty, and according to Thompson companies attempt to respond by structuring themselves in the most appropriate way to the complexity of the environment. Specifically, Thompson argues that organizations are able to create certain units (boundary-spanning units) whose purpose is to deal with uncertainty, and which create the possibility for other units (core technologies) to operate under conditions closer to certainty. In general terms, organizational structure, therefore, is seen as a response to environmental uncertainty in the sense that the complexity of the structure, the variety and number of units, tends to match the complexity of the environment.

The other study, Galbraith [1973], emphasizes the role of information in the matching process of an organization to its environment. Uncertainty is measured by the difference between the amount of information necessary to perform a given task and the amount of information already possessed. In order to achieve a given level of task performance, the organization must acquire a predetermined amount of information which is as high as the outputs (number of different

products and services) and inputs (number of different technical requirements on a project, number of different machine centres in a factory) required to perform the task are diverse. Accordingly, it is not uncertainty per se that is critical to a company, but the need for additional information which uncertainty generates. Relationships between environmental uncertainty and structure via the information flow in the successful organization are hypothesized by Galbraith in the following terms: in the presence of high uncertainty, a low degree of structuring of activities (flexible, decentralized structures) is appropriate since it facilitates the processing of the high volumes of information needed during task execution; on the other hand, with low uncertainty highly structured activities (rigid, centralized structures) are suitable to the low volumes of information likely to be needed. In the Galbraith study, as in the others reviewed above, the organization's internal processes are seen as a response to environmental requirements.

The major contribution given by the contingency approach to the present work is to have demonstrated that corporations are adaptive, transient systems responsive to ever-changing phenomena of the outside world. A general criticism of the contingency approach, however, is that the understanding of the relationships between enterprise and environment has been kept restricted to a too narrow characterization of the environment [e.g. Negandhi, 1975]. By reducing all the environmental complexity to such traits as technology, market, or degree of certainty, the contingency approach fails to provide a comprehensive basis to study the patterns of environmental influence on an enterprise. Such a basis may perhaps be found in another area of the study of organizations - cross-cultural comparative management - which takes an essentially macro view in the study of external environmental impacts on business enterprises.

2.3. The Contribution from the Comparative Management Theory

The conceptual and methodological approaches employed by the comparative management theorists can be divided into four distinct groups [Schollhammer, 1969], one of which is of particular interest to the present study. This group represents the so-called ecological or environmental approach, according to which the business enterprise is viewed as part of an ecological system where external factors of the environment have a determining impact on managerial effectiveness [ibid., p.85]. On the other hand, managerial effectiveness is seen to determine firm efficiency, which in turn affects aggregate economic efficiency (at region or country level).

The environmental approach to comparative management attempts to provide a conceptual model of environmental analysis upon which comparisons of management practices and managerial efficiency among various countries can be built. At the base of this approach is the assumption that external environments vary greatly between countries and cultures, and that differences in the environments within which firms must function have a crucial impact on the performance of enterprise management. Among the most influential authors associated with the environmental approach are Farmer and Richman. In their main work [Farmer and Richman, 1965], they justify the perspective they adopted by calling attention to the fact that:

"... most studies of management have taken place in a "black box" labelled "management", without much concern for the external environment in which the firm and its management may operate. As long as this external environment is basically the same for all firms the approach is valid; however, in cases when the environment differs significantly, present theory fails to describe, explain, or predict comparative differentials in managerial performance". [ibid., p.5]

Farmer and Richman further elaborate this point by providing an example which, incidentally, is particularly relevant to the case of a multinational company with subsidiaries in various countries:

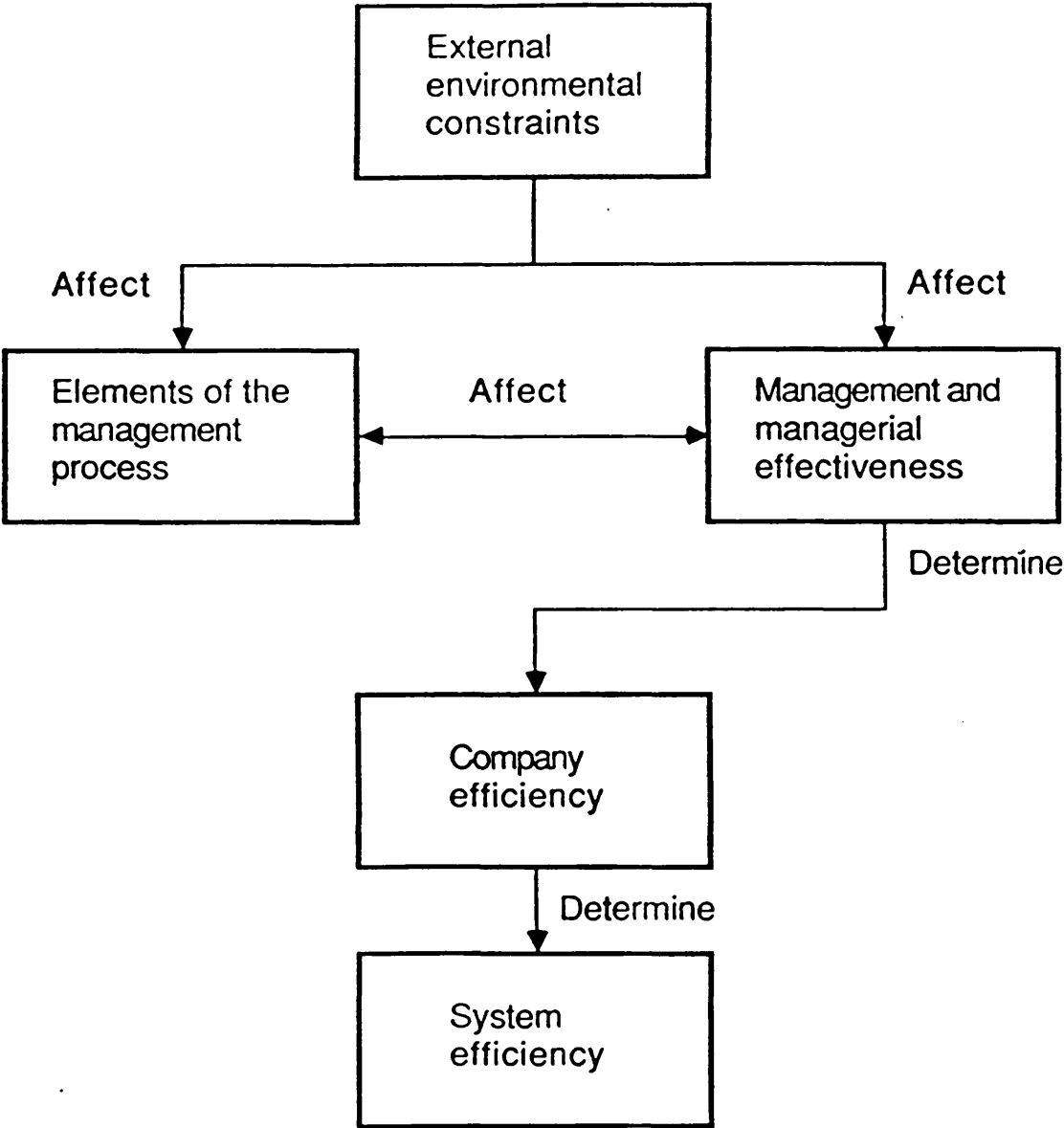
"We observe two firm managements in the same sector, and we note that in country A managers seem far superior to their counterparts in country B; however, we cannot then state categorically that managers in A do their internal managing job better than those in B, since the nature of the external environment facing the two managements may be completely different. A may be a country with ample supplies of high skill labour, while B may have serious shortages of this important factor. A may also have a good, low cost transportation system, while B is faced with transport shortages, high cost freight movements, and the need to build far larger inventories than A. A may have an excellent credit system, which allows a competent firm to obtain adequate funds, while B may have no organized capital markets. The result could well be that the presumably inept managers in B are actually doing better than their counterparts in A, given their external constraints". [ibid., pp.5-6].

The above quotations generally illustrate the underlying rationale of the environmental approach. In order that differing external influences on companies' operations might be understood, authors have been led to develop a classification of environmental variables, which could provide them with a means to isolate major environmental conditions and to examine their relative influence on managerial effectiveness and economic achievement. One of the first attempts was made by Hall [1959, 1960] who concentrated on cultural and sociological environmental differences and their impact on international management. Despite having outlined a classification of cross-cultural differences, Hall, however, did not provide a comprehensive conceptual model to be used in further comparative management studies. Another contribution came from Blough [1966], who emphasized that the problems of international business are different from those of domestic business, and mainly studied the influences of governmental policies on business decisions. This was again a narrow model of environmental analysis which paid only scant attention to the impact of cultural and economic factors.

The first comprehensive classification of environmental influences on an enterprise was provided by Farmer and Richman [1964] in a tentative paper that was later developed into a series of articles and books [Richman, 1965a, 1965b; Farmer and Richman, 1965, 1966; Farmer, 1967], which reach the present day [e.g. Farmer and Richman, 1984]. Such a classification of environmental variables includes four major

categories - educational, sociological-cultural, political-legal, and economic - each of which is broken down into a substantial number of factors or constraints that may aid or hinder managerial performance in a particular country [Farmer and Richman, 1965, ch.3]. According to Farmer and Richman, multinational corporations are still exposed to a fifth environmental constraint category, the "international constraints" [ibid., ch.14]. In total, 43 different environmental factors were identified and explained by the authors(2). Having created a comprehensive checklist of environmental influences on an enterprise, Farmer and Richman then developed a model which attempts to understand how external constraints may influence managerial decisions and ultimately enterprise and country efficiency. This model is presented in flow-chart form in Exhibit 2.I. It establishes that company efficiency, and ultimately system (e.g. country) efficiency, are determined by the level of managerial effectiveness, which is defined as the **"level of efficiency, from society's point of view, with which the overall management process is performed in a given enterprise"** [Farmer and Richman, 1965, p.25]. Managerial effectiveness is seen to be affected directly not only by external environmental constraints, but also by the elements of the management process, which in turn are equally subject to the direct influence of the external environment. Such elements of the management process consist of a number of aspects considered to be critical both to the managerial functions (finance, marketing, production, personnel, research and development) and to policy decision areas (planning and innovation, control, organization, leadership and motivation, public and external relations)(3). There are a number of limitations inherent to the Farmer and Richman model, particularly a lack of precise definitions, and a subjectivism latent in any attempt to operationalize the model's relationships. Despite its limitations, the model theorizes in a rather original way the consequences of the impact of the total environmental setting on an enterprise, and presents a very comprehensive inventory of environmental variables which when used cautiously can be a tool for identifying those factors most critical to the successful operation of an organization in any given country. Authors such as Douglass [1975a, 1975b, 1976], and Wright [1976-77] employed with satisfactory results the Farmer and Richman model as a means of describing the environmental context of a

Exhibit 2.1 - Farmer and Richman's Model of the Impact of External Environmental Constraints on Managerial Decisions and System Efficiency



Source: Farmer and Richman [1965, p.35]

country.

In summary, the environmental approach to the comparative management theory has explored the impact of external variables affecting the operation of complex organizations, and developed an almost exhaustive list of environmental factors that are likely to influence the critical elements of the management process. However, the overemphasis on the external environment led to regarding individual organizations as being basically a passive agent of external constraints. There is a marked tendency for the theory to stress the necessity for environmental adaptation and not enough attention is paid to the fact that organizations may respond to the environment by attempting to influence it in order to achieve desired goals [Schollhammer, 1969]. Besides, the environmental approach appears to be unable to cope with the fact that the impact of external factors on business operations is not likely to be uniform. If theoretically it is possible to envisage a list of external environmental factors and separate them into compartments, empirically it becomes very difficult to judge the impact of a given constraint on internal management practices and effectiveness [ibid.].

Such weaknesses of the comparative management theory were not found in the contingency approach to organization theory. As was discussed in the previous section the contingency approach assumes a close interaction in both directions between organization and environment and does not overlook the role of management as a change agent. Similarly, the contingency approach has gone much further in explaining how internal organization processes change with changes in the external environment. The major criticism made to the contingency approach, that the understanding of the environment per se has been kept restricted to a too narrow set of factors, is not applicable, however, to the environmental approach. Indeed, the latter has come up with a very complete list of external factors likely to influence companies' operations in any country. This is regarded as the main contribution of the environmental approach. Accordingly, both bodies of theory, namely the contingency approach to organization theory and the environmental approach to comparative management theory, appear therefore to be complementary in some important aspects.

The next section will attempt to integrate the two approaches by presenting a model which accommodates the views of both the organization and the comparative management theories.

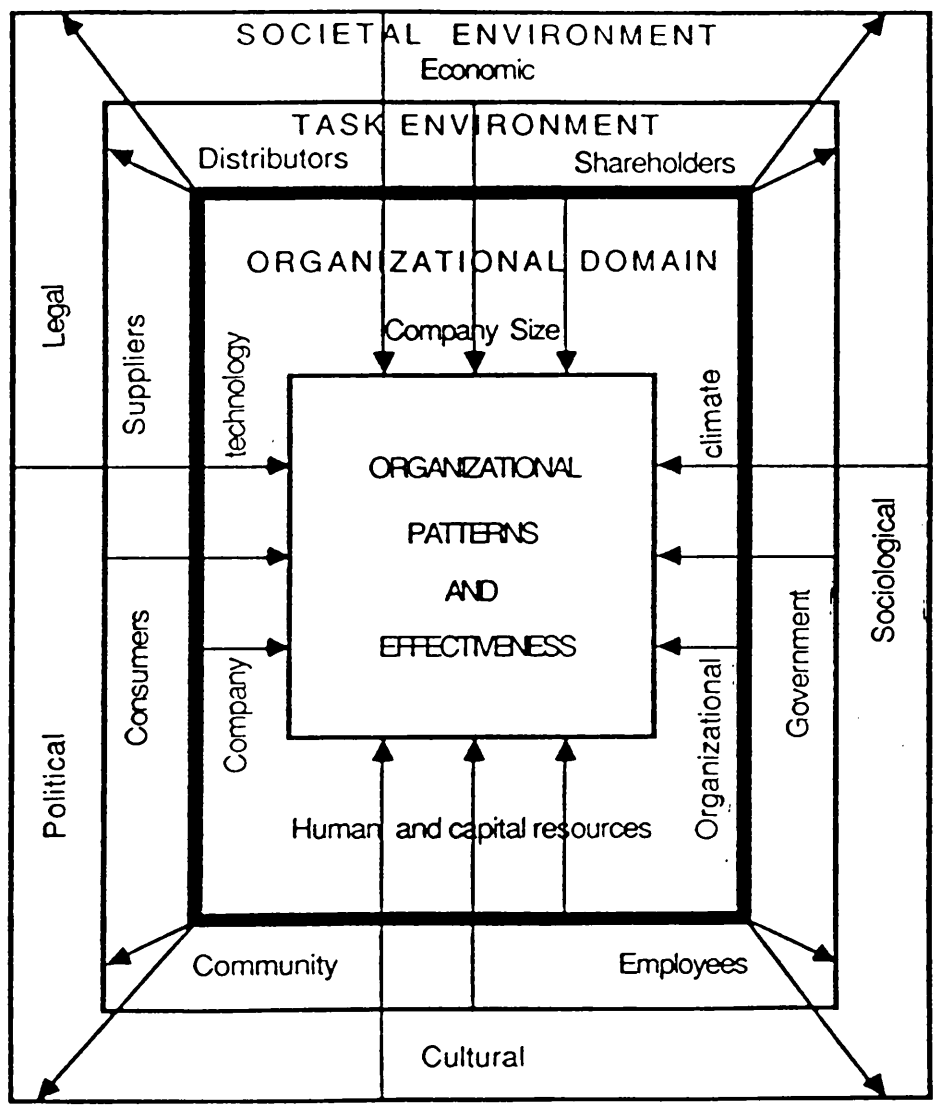
2.4. An Integrating Model of Environmental Interaction

The views of both the contingency approach (organization theory) and the environmental approach (comparative management theory) as regards the effect of external variables on the functioning of complex organizations can be reconciled in a model proposed by Negandhi [1975]. This model incorporates a number of variables of different nature which are seen as influencing organizational patterns and effectiveness. Such variables are conceptualized to exert their influence at three successive boundaries: 1) societal environment; 2) task environment; and 3) organizational internal domain (see Exhibit 2.II).

The first level, societal environment, represents the broad and intricate macro context within which an organization has to function in any country. Comparative management theorists such as Farmer and Richman [1965] have made useful contributions to the understanding of this environmental level by characterising it in its diverse economic, political, legal, sociological, and cultural dimensions.

The task environment, as a particularisation of the macro-societal environment, is that part of the total setting which, according to such authors as Dill [1958] and Thorelli [1967], directly transacts and competes with the organization and is potentially relevant to goal setting and goal attainment. A large number of organization theorists [e.g. Lawrence and Lorsch, 1967; Thompson, 1967; Galbraith, 1973], have attempted to explain how the task environment impacts on organizational patterns and, on the other hand, how these respond to the environment.

Exhibit 2.II - Levels of Environmental Interaction on a Company's Internal Patterns and Effectiveness



Source: Adapted from Negandhi [1975, p.340]

Finally, the third level is now situated inside the company's boundaries, in contrast with the two previously discussed which are external to the company. This level, which has been termed here as the organizational internal domain, was defined by Negandhi as **"the environment existing within the closed system that marks the boundaries of the organization"** [1975, p.341]. Variables, such as company size, technology, organizational climate, and human and capital resources are among important organizational traits that have been demonstrated to have an influence on organizational patterns and effectiveness [e.g. Caplow, 1957; Indik, 1963; Stogdill, 1965; and generally all the authors associated with a closed systems view of organizations]. These variables are very much under the range of operation and control of the decision maker.

The model presented here has the advantage of integrating the different streams of theory which have been concerned with the study of the interaction between organizations and environment. It provides the present study with a comprehensive framework which helps understanding the efforts made in the literature to demonstrate that a company's organizational patterns and effectiveness are not exclusively affected by internal managerial action, but are also influenced by the particular external environmental conditions that are encountered.

2.5. Summary and Conclusions

This chapter aimed at demonstrating that the environment external to an organization does influence its internal functioning. Two major bodies of theory which have addressed the problem of the interaction between enterprise and environment, namely organization theory and comparative management theory, were reviewed here.

An effort to conceptualize the dynamic relationship between the business enterprise and its environment was made by organization theorists who were quick in adopting the notion of open system. This notion, originally based on certain physical properties found in biological systems, led into viewing organizations as entities which are not self-sufficient and which, in order to survive, have to engage in input-output transactions with other entities in the environment. Difficulties in operationalizing the new concepts of the general systems approach prompted researchers to develop a more manageable and pragmatic perspective which keeps some of the most relevant concepts of the systems thinking: the contingency approach. A very large volume of work associated with this view has been produced over the years. Common to it all is the finding that the pattern of internal states and processes developed by an effective organization are contingent upon the particular environmental conditions (e.g. technology, market characteristics, degree of certainty), to which the organization is subject. Underlying these findings is the recognition that business enterprises are adaptive, transient systems which constantly respond to ever-changing phenomena of the outside world. Due to the very need of keeping the number of variables in the analysis down to a manageable number the contingency approach adopted an essentially micro view of the environment, which resulted in a lack of comprehensiveness in the understanding of the external factors that are likely to influence company internal processes.

In a different avenue of research the comparative management theory also explores the influence of the external environment on an organization. The so-called ecological or environmental approach views the business enterprise as part of a whole where external characteristics of the environment produce a determining impact on management practices and managerial effectiveness. External conditions are assumed to vary substantially across countries and cultures. Consequently, any comparison of internal management processes in companies operating in different parts of the world must be accompanied by an attempt to understand how the local environment impacts on companies' operations. This view generated the need for a classification of environmental variables which could provide researchers with an appropriate tool to identify major environmental

conditions in a given setting. In this sense, the ecological approach to comparative management theory takes a macro view in the way it approaches the environment. Such a macro view is reflected in the level of comprehensiveness found in some models of environmental analysis that have been developed.

If on one hand, the environmental approach to comparative management did succeed in providing an instrument to describe any environmental scenario in its multiple facets, it did not produce, on the other hand, convincing results as to the particular impact of given environmental constraints on internal management practices and company efficiency. In this respect, the contingency approach to organization theory has probed deeper into the realm of the interrelationships between enterprise and environment. However, its analysis has focused on a very limited number of environmental features, which is far from the comprehensiveness of the models developed by the environmental approach.

The chapter concludes with the presentation of a model which attempts to integrate the two approaches from the organization and the comparative management theories. This model incorporates most of the environmental variables whose interaction with companies' internal processes has been studied in the literature. Three levels of influence on organizational patterns and effectiveness are conceptualized in the model. The first two are external to the organization and include the variables developed by the environmental approach (the societal environment level) as well as the variables studied by the contingency approach (the task environment level). The third level of influence (the organizational domain) is internal to the company and includes those variables that are under the direct control of the companies' management. The model is believed to provide a global overview of the many differing factors that are likely to affect a company's operations in a given environment.

Footnotes:

- (1) An illustration to this point can be found in Amey [1979, p.250], when he demonstrates the disagreement between two leading system theorists (Von Bertalanffy and Ashby) as to the basic definition of a cybernetic model.
- (2) These environmental factors will be discussed in more detail in the next chapter, where several models of environmental analysis and assessment will be presented.
- (3) A comprehensive list of 76 critical managerial elements is provided by Farmer and Richman [1965, pp.20-21]. The list was built with the assistance of expert opinions upon which the Delphi technique was applied [pp.329-334].

CHAPTER 3 - THE MULTINATIONAL CORPORATION AND ITS EXTERNAL ENVIRONMENT

3.1. Introduction

The discussion regarding the relationship between an enterprise and its external environment was conducted in the previous chapter at an abstract, theoretical level which accommodated any type of organization. In the present chapter, the discussion of this relationship is brought into a more concrete level which centres upon a particular type of organization: the multinational corporation (MNC).

The MNC is only one of the many forms of doing business across national boundaries [Daniels, Ogram and Radebaugh, 1982, ch.1]. Common to all of them are the particular problems and opportunities that emerge because an entity is operating in more than one country. When the activities of a firm are confined to a sole (domestic) environment managers face a scenario which is reasonably stable in geographic terms. The same language, a common currency, relatively homogeneous culture, a single tax system, similar interest rates, compatible infrastructures, are all normally expected by domestic managers to remain constant from one region to another. In international business, however, there are few fixed constraints. Many environmental characteristics that are largely irrelevant to domestic business, such as foreign legal systems, foreign exchange markets, intra-national cultural features and political regions, suddenly assume a decisive importance once a firm crosses its domestic border.

The MNC is generally regarded as the most elaborate form of international involvement for a business organization. However, there is a considerable amount of disagreement as to what constitutes a MNC. Many definitions have been proposed in the literature⁽¹⁾. Some of

them emphasize operational aspects such as number of countries in which the company is established, or sales turnover generated outside the home country [e.g. Vernon, 1971, ch.1]. Others stress conceptual aspects such as the collaboration between headquarters and subsidiaries in the establishment of general standards and a common strategy, or the adoption of an attitude of "multinationalism" on the part of managers [Perlmutter, 1969; Scott, 1972]. A comprehensive definition which serves the purposes of this chapter is provided by Priel [1974, p.46]:

"A multinational company is an industrial or commercial enterprise which pursues its business objectives on behalf of its owners by actively managing investments in domestic and foreign territories."

At the core of this definition lies the capability of the headquarters of a MNC to exercise control over its overseas subsidiaries. The concept of managerial control over an investment has been extensively used in the literature as the distinctive characteristic which enables to draw a separation between foreign direct investment, the hallmark of the MNC, and other forms of overseas investment like foreign portfolio investment [e.g. Aharoni, 1966; Daniels, Ogram and Radebaugh, 1982, ch.7].

As it was demonstrated previously, the relationship between an enterprise and its external environment is a dynamic, interactive, two-way phenomenon. The present chapter attempts to capture the nature of this relationship by discussing the impact of the environment on the operations of a MNC, and also by revealing the response of the MNC to the threats and opportunities posed by the environment.

The chapter starts by discussing the nature of the external environment characteristic to a MNC. A framework in which to comprehend the functioning of a multinational is set first, taking a systems view. Next, the variability in the external environment which international companies have to face is described. Such a variability may simultaneously be due to changes in the environmental characteristics across geographic location, and to changes in

atmosphere towards multinationals over time. Both cases are reviewed, with the intent of illustrating the differences in the total external environment encountered by MNCs as compared to domestic companies.

Faced with an overall external environment with certain characteristics and a given makeup of internal strengths and weaknesses, the MNC must act in a way as to match its activities to both the environment in which it operates and its own resource capability. This is the essence of corporate strategy, which the chapter discusses in some length. After the nature of strategic management being reviewed, the chapter resorts to the discussion of multinational strategies in the context of companies' response to the forces for fragmentation and unification in the pattern of international operations. The factors influencing the choice of a particular strategy by a MNC, namely a global integration strategy, a segmented nation-for-nation strategy, or a mixture of the two, are then presented with a particular focus on "economic" (internal) and "political" (environmental) imperatives that prompt company response in a given direction.

Finally, the chapter reviews the environmental scanning activity in MNCs which by promoting an adequate fit between an organization and its external environment, constitutes the foundation of strategic management. Practices adopted by companies to collect and analyse information about foreign environments are described, as revealed by a number of empirical studies conducted over a period spanning more than a decade.

3.2. The Multitude of Environmental Frameworks in International Business

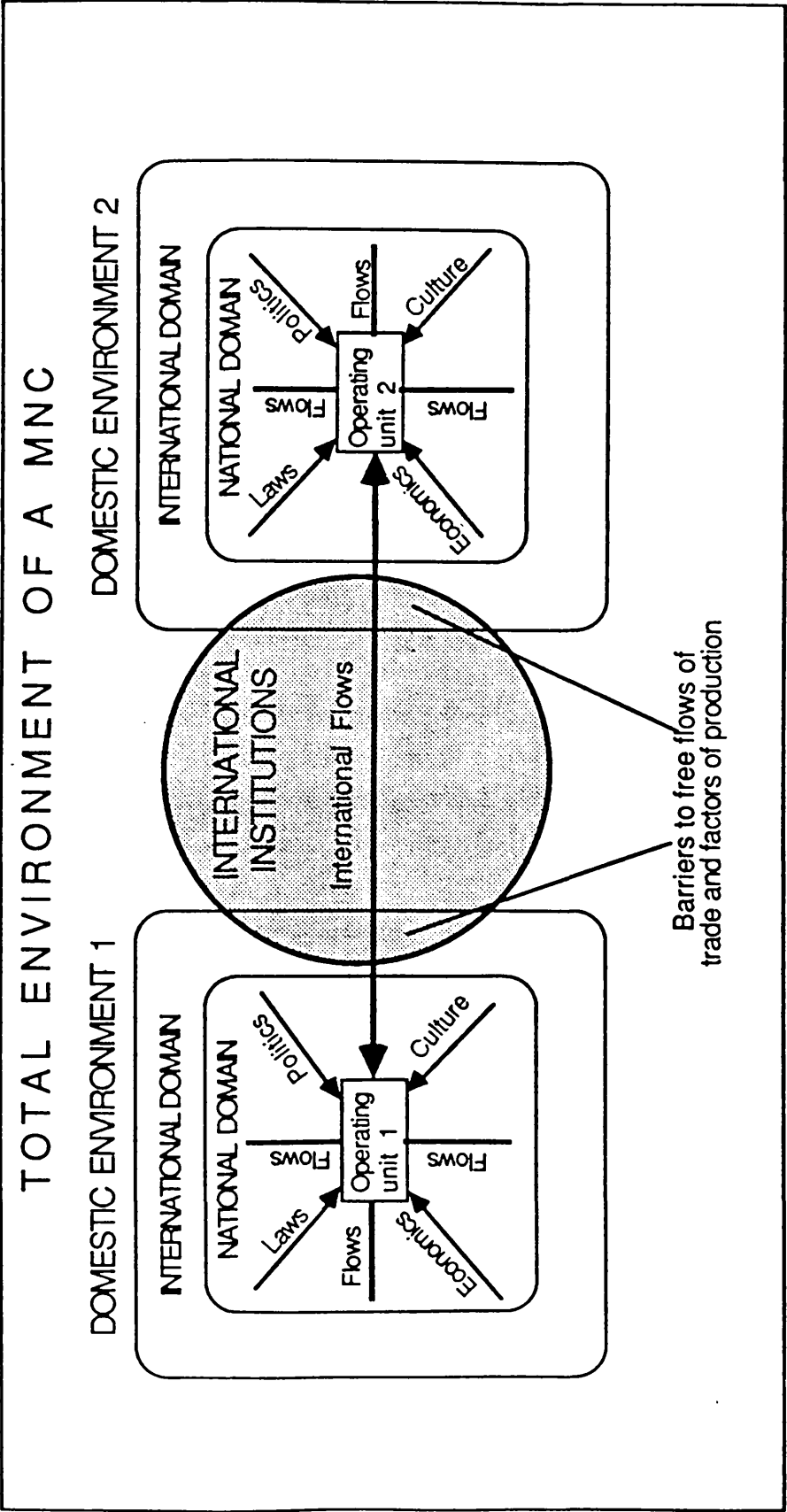
3.2.1. The MNC Viewed as a System

A MNC is a system where typically a number of operating units or subsidiaries (subsystems) are located in more than one country. The MNC system normally commands a common pool of resources and responds to a common strategy [Robbins and Stobaugh, 1973a]. It is formed by a network of operating units linked to one another by flows of capital, goods, services, people, technology, and information, all of which cross national frontiers. As a system, the MNC is open to the environment. Such an environment, as it will be seen, is subject to a high degree of variation in its components, and poses special problems that are not likely to be encountered by a domestic company.

A model encompassing the complex reality of the MNC system is presented in Exhibit 3.I. This model, outlined in Korth [1985], takes any two operating units of a same MNC. Each of these units is assumed to be established in a different country, and, accordingly, is affected by a unique set of socio-cultural, political, legal and economic factors. At the same time, each unit, like any other business organization, sends flows of goods, services, salaries, taxes, payments, information, pollution, and so forth into the particular environment in which it operates [ibid., ch.1]. Because the two units belong to the same company, they are both subject to the control of headquarters, and they are tied up by a common strategy and common resource allocation criteria. Consequently, the two units are linked by international flows of the kind discussed in the preceding paragraph.

In an ideal world of free movement of capital, goods, and human resources, international flows among two operating units of a same MNC would be permitted to occur without any obstacle. The reality,

Exhibit 3. I - Model of a MNC System



Source: Adapted from Korth [1985, pp.13-17]

however, is very different. Economic interchange among firms in different countries is impaired by a host of controls and regulations that are imposed by nations. These controls reside in the international domain of each domestic environment (see Exhibit 3.I). They are made of obstacles such as tariffs and other trade controls, which interfere with free movement of goods and services, capital controls, which impede money movements, and exchange controls, which obstruct the free access to foreign exchange markets. Historically, as it will be seen, the nature and degree of these controls, regulations, and other obstacles to the activities of the MNC have changed according to the volatility of the international environment and the atmosphere, especially in host countries, towards multinational business.

The total environment of a MNC in any given point in time, as understood in the model presented in Exhibit 3.I, is therefore composed of the respective domestic environments whose national borders are intersected by the flows generated among the operating units of a particular multinational business network. In addition, the international environment includes a number of institutions that overlap countries and which play an important role as regulators and sometimes referees of international economic activity. Such institutions comprise, among others, the world monetary system, the foreign exchange markets, the international financial markets, as well as economic organizations such as the International Monetary Fund, the World Bank Group⁽²⁾, the General Agreement on Tariffs and Trade, several regional development banks (e.g. the Inter-American Development Bank, the Asian Development Bank), and a few areas of economic integration (e.g. the European Economic Community (EEC), the Latin America Free Trade Association (LAFTA), the Council of Mutual Economic Assistance or COMECON).

Set in the above framework, designed to understand the functioning of the MNC, the next two sub-sections will discuss in some detail how the external environment of a multinational is subject to variability, both geographically and in time.

3.2.2. Changes in Environments Across Geographic Location

One of the most distinctive features of a MNC as apposed to a domestic company is the fact that the MNC is subject to a much wider range of variation in the characteristics of the environment in which it operates. In fact, while in a domestic company most environmental characteristics are likely to vary substantially only along time, in a MNC they also vary across geographic location. The degree of variation due to geographic factors is related not only to the number of different countries where the corporation operates, but also to the very nature of such countries. For example, it can be argued that cultural differences are greater between Europe and the most of Asia or Africa, than between Europe and North America. Similarly, legal differences are likely to be greater across nations whose legal systems derive from separate foundations (e.g. the Napoleonic Code in France, the Communist legal framework in Yugoslavia, the Koranic law in Saudi Arabia), than across countries which share their legal foundations in the principles of common law (e.g. the United Kingdom and Australia). Also, certain economic/financial characteristics of countries such as the degree of sophistication of their consumer markets or capital markets are bound to be associated with the countries' respective stage of economic development.

The diversity of environmental conditions existing across countries or clusters of countries (e.g. the EEC) poses very special problems to MNCs. When a company crosses its national boundaries to become multinational it no longer deals with one sole currency, one common language, the same political system, one identical set of laws, an homogeneous economic structure. In reality, the company has to face as many and difficult environmental frameworks as many and different are the countries where the company is established. Exhibit 3.II presents a list of environmental factors that are likely to change from one country to another. These, naturally, make for special complexity in international business. The list is intended to be merely illustrative, and covers only some of the problems that are most commonly encountered by MNCs in their total environment.

Exhibit 3.II - Some Environmental Factors That Are Likely to Change Across Countries and Which Create Added Complexity in International Business

CULTURAL
<p>Different languages Diverse customs Labour - relations, attitudes and organizations Management - ethics, outlooks, style and competence Expectations and life styles</p>
POLITICAL
<p>Different rules of the game Defence and foreign policies - impact on industry and trade Governments hostile or restrictive towards foreign business Home government restrictions on investment abroad Red tape and uncertainty in industry-government dealings</p>
LEGAL
<p>Differences in company law, especially concerning foreign firms - e.g. remittances Differences in general commercial law Restrictive practices legislation - e.g. monopoly, separation of public and private sectors</p>
FISCAL
<p>Different tax systems Tax concessions Trade barriers</p>
ECONOMIC
<p>Different stages of economic development Different growth rates - some economies in recession, others in boom Different economic policies Diverse consumer markets</p>
FINANCIAL
<p>Currency and exchange rates Exchange control restrictions Different interest rates Problems of transfer pricing and movements of capital Different capital market facilities</p>

Source: Based on Brooke and Remmers [1972, ch.9], and Farmer and Richman [1965, ch.3 and 14]

3.2.3. Changes Over Time in the Overall Atmosphere Towards Multinationals

Besides the variations in environmental conditions in any point in time due to geographic location, the MNC is also subject to the overall atmosphere towards multinational business. This overall atmosphere sets a particular scenario under which MNCs' activities evolve. Such a scenario reflects on a world scale attitudes towards international companies and conditions forced upon their operations, and superimposes on the differences in the environments across countries and geographic areas.

Over the years, the overall atmosphere towards multinational business has changed in ways which are of great relevance to the development of the MNC. Since the Second World War, basically three periods with very different characteristics can be found. The first, ranges from 1945 to the late 1960s. The second period starts in the late sixties and spans over the decade of the seventies. Finally, the third period corresponds to the fraction of the eighties lived so far. Each of these periods will be characterized below.

The period after the war

The period between the end of World War II and the late 1960s is associated with the rapid growth of MNCs which became a prominent force in the world economy. Although many companies had extensive involvement overseas by 1945, the large scale rise of multinationalism only took place after the war. This period of the twentieth century is seen by authors such as Dunning [1981, ch.15] as the maturation of a certain phase in the evolution of international business. Such a phase began at the turn of this century, remained dormant in the interwar period, and awakened after the Second World War in conditions that were ideally suited to the expansion of companies' activities across national boundaries, through the medium of equity investment [ibid, p.410].

The overall atmosphere towards multinational business during the two decades that followed the war is described by Ringbakk [1976] in an influential article. In the beginning of this period, Western Europe and Japan engaged in a massive effort of reconstruction which created many business opportunities. World-wide shortages of capital, know-how, and human skills could only be met by the U.S.A., whose economy by 1950 was considerably stronger than any other country, and which had a vast technological lead over the rest of the world. This is the time of the absolute dominance of the U.S. MNC. Only later in the period European and then Japanese firms succeeded in competing on equal terms with American corporations [Franko, 1978; Negandhi and Baliga, 1981, ch.1]. The period after the war is characterized by a general stability in geopolitics. The U.S. dominance in the political and economic areas created zones of influence which constituted "friendly" geographic areas for business. The ideology-based cold war produced its own stability where areas hostile to American business were clearly identified and known. As Ringbakk [1976] remarks, from a corporate viewpoint this meant reduced and often predictable political risks. National resources were ready to be explored and little demands were made by governments in the countries where such resources were available. Increasing energy needs produced large-scale investments in the exploration and production of oil in the Middle East and Latin America, providing the markets of the "North", to where most of the value-added creating investment was channelled, with plentiful and cheap raw materials.

The growth of the MNC amidst such favourable conditions was further spurred by considerable improvements in international transportation and communication systems, which facilitated the flows of products, services, information, and technology. Also, the development of an international institutional framework served the strengths and needs of the MNC. In effect, economic integration blocks such as the European Free-Trade Association (EFTA) and the European Economic Community (EEC) helped create larger markets where expertise in mass production and mass marketing were required. Simultaneously, international sources of funds such as Eurodollars, Eurobonds, and Eurocurrencies provided the growing MNC with an additional financing source [ibid.].

In summary, the period after the war is marked by an intense growth of the MNC under conditions of stability and low political risk. Host countries, both in the industrialized and in the developing worlds, were eager to attract foreign direct investment, and imposed little or no restrictions on MNCs' operations in their territories. As John Dunning explains:

"Because [...] of the need for the package of resources which the multinational could provide, host countries were willing to offer generous incentives to inward investors. Some attempted to influence the direction of investment and to ensure that it was in conformity with their more pressing national goals, for example, improving the balance of payments, but most imposed few constraints. The cost/benefit ratio was rarely calculated, and the benefits were taken for granted. Little attention was paid to obtaining the resources provided by multinational enterprises in other ways." [1981, p.412].

The late sixties and the seventies

By the end of the 1960s the overall atmosphere towards MNCs had dramatically changed. In a relatively short period of time, general conditions faced by corporations in their international activities had been altered from a world of great opportunity to a world full of uncertainty and hostility.

During the period of little more than a decade, until the end of the 1970s, many changes took place in the international environment. In geopolitics, stability gave way to an upsurge in conflicts among nations, a breakdown in traditional alliances, the emergence of new centres of power such as the Arab world, and an exacerbation of nationalistic feelings [Ringbakk, 1976]. Resources became scarce due not to physical shortages but to politically motivated actions. The emergence of host-country dominated resource cartels, whose most notable example is the Organization of Petroleum Exporting Countries (OPEC), made the MNCs and the industrialized countries short of cheap raw materials, and made them dependent on resource-rich developing countries with different objectives and ideologies. In resource-poor developing nations, increased problems of food and population gave often rise to a desperate situation of chronic malnutrition and

widespread poverty which added tensions to the already strained geopolitical conjuncture. Simultaneously, the international economic order of the period after the war, characterized by growth and stability, was replaced in the 1970s by a scenario of high inflation rates, widespread currency fluctuation, extensive barriers to trade, and increased economic protectionism.

All these sudden changes were accompanied by a shift in the attitudes and values of judgement towards the MNC both in home countries, and, above all, in host countries. In the words of Ringbakk:

"Fundamental changes of the kind characterizing [the period following the late 1960s] have not only added uncertainty and complexity to the multinational environment, they have also impacted directly on the relationship between the multinational corporation and home and host countries alike. Attitudes towards foreign direct investments, international production, and multinational corporations, have begun to reverse and the free investments climate of the past is being replaced by suspicion, restrictions, and new constraints and regulations. Foreign economic dominance is resisted, resented, and no longer tolerated. Host countries are scrutinizing existing and new foreign direct investments in efforts to align private to public interests. Existing contracts are no longer based on terms dictated by the MNC but on the principle of maximizing the benefits for the host countries by extracting the most favourable terms from the foreign investors." [1976, p.7]

In host developing countries, a new mentality was installed motivated by the awareness of the value of the resources possessed, and, simultaneously, by the acquisition of the knowledge necessary to control the exploration and use of these resources. Countries frequently developed strong feelings against the MNCs, which were considered instruments of new forms of economic imperialism or colonialism [Dunning, 1981, ch.15]. A vast and vigorous literature on "dependencia" [e.g. Franko, 1967; Cardoso and Faletto, 1970; Boulding and Mukerjee, 1972], raising the issue of the dependence of the weak nation-state upon the powerful multinational conglomerate, contributed to a confrontation between host governments and other publics in host countries, and the MNC [La Palombara and Blank, 1977, ch.1]. Provocative titles of books published by respected authors during the late 1960s and the 1970s - for example, "The American Challenge" [Servan-Schreiber, 1968], "The Invisible Empire" [Turner, 1970],

"Sovereignty at Bay" [Vernon, 1971], "The Sovereign State of ITT" [Sampson, 1973], "Global Reach" [Barnet and Mueller, 1975], and "The Frightening Angels" [Negandhi and Prasad, 1975] - reflected how much the MNC was under attack at the eyes of the public opinion [Negandhi, 1980]. As La Palombara and Blank observed at the height of the resentment against the MNC:

"in a world of political volatility the multinational corporation bids fair to become the chief whipping boy for all of the ills, failures, frustrations and calamities that individuals claim to detect in society." [1977, p.3]

The confrontation between the host nation and the MNC was not circumscribed to words. In effect, there is a long history of real interference by host governments in the operations and activities of multinationals. Over the years the literature on political risk has compiled the cases of friction between these two parties, which now amount to an impressively extensive list (see, for example, Kobrin [1979/80], and Levis [1979]). Conflicts between MNCs and host governments, erupted in a virulent manner during the period under analysis. Different forms of interference included nationalization, intervention/requisition, renegotiation of contract, forced sale [Hawkins, Mintz, and Provissiero, 1976], as well as "creeping" expropriation and changes in the general regulations governing foreign investors' operations [Levis, 1979, ch.4]. The consequences for the nations from these actions are diverse. In effect, the host nation has not always benefited from interference on the multinational business, as it is suggested by Stoeber's [1985] account of the disastrous effects for Zambia from the nationalization of its copper industry. While nationalization and expropriation of property are the forms of interference most visible and noted, of greater overall importance, because much more common, are a multitude of smaller demands made by host countries - both developing and developed - on MNCs [Fayerweather, 1966]. Such demands include the share of capital and control a foreign company is allowed to hold in a local venture, the reinvestment of earnings, the indigenization of technical and managerial positions, the transfer of technologies, and the subordination to national plans and interests, just to mention a few. Of considerable importance are also the pressures on MNCs to disclose

information, which are often an instrument used by governments and other groups to increase their bargaining power towards the multinationals. As Gray [1984, p.13] remarks:

"In addition to arguments concerning the right of access to information, the demand for greater disclosure from MNCs may be viewed as a part of a bargaining process - an effort by host countries, and developing countries in particular, to improve their bargaining powers."

Exhibit 3.III presents a list of demands classified as "good corporate behaviour principles" [Negandhi and Baliga, 1981, p.109] established by host countries for foreign companies operating in their territory. Each of these behaviour principles is related to an alleged objectionable practice by the MNC, from the perspective of the host country. Although the list presented in the exhibit is based on the demands made by Canada on multinationals (especially U.S. companies), it is believed that the list typifies the situation encountered in the seventies as regards demands made by host countries on MNCs.

It is important to note that the pressure exerted on the multinationals during the period under analysis did not come exclusively from the host countries. Also at home the MNC was often subject to criticism and attack. Accusations of the MNC exporting jobs and technology thereby reducing home country comparative advantages and contributing to domestic unemployment were frequently heard by trade unionists and other groups at the MNC home (see for example, Goldfinger [1973]). Simultaneously, the MNC was criticized in its country of origin for exploiting the lower labour costs in other countries notably in the Third World, for contributing to domestic balance of payment difficulties by increasing imports and reducing exports, and for diverting capital away from home to invest abroad [Ringbakk, 1976].

In summary, the period of roughly a decade ending in the late 1970s, in great contrast with the atmosphere found previously, was characterized by high turbulence in the international geopolitical and economic environment, and by new attitudes both in home and host countries generally hostile to the multinationals. Besides having to confront host governments' accusations that they exploited local

Exhibit 3.III - Principles of Good Corporate Behaviour Demanded by Host Countries to MNCs and Respective Alleged Objectionable Foreign Subsidiary Practices

----- GUIDING PRINCIPLE SUMMARY -----	----- ALLEGED OBJECTIONABLE PRACTICES -----
1. Full realization of the company's growth and operating potential in the host country.	1. Home-based corporate planners institute expansion and out-back plans without regard for the host country's plan and aspirations.
2. Make the host country subsidiary self-contained, vertically-integrated entity with total responsibility for at least one productive function.	2. The host country subsidiary is primarily an assembler of imported parts or distributor of goods produced elsewhere so operations can be easily shut down or transferred.
3. Maximum development of export markets from the host country.	3. Filling export orders to third-country markets from the home country stock earns credits for home country balance of payments rather than host country's.
4. Extend processing of host country's raw materials through maximum number of stages.	4. Have as few materials-processing stages as possible in the host country to minimize political leverage.
5. Equitable pricing policies for international and intracompany sales.	5. Negotiated or spurious prices host-home country subsidiaries are designed to get around host country income taxes.
6. Develop sources of supply in the host country	6. Preference for home country or third-country sources for purposes of corporate convenience or political leverage.
7. Inclusion of R&D and product development.	7. The concentration of R&D and product design in the home country means the host country can never develop these capabilities.
8. Retain substantial earnings for growth.	8. Profits earned in the host country do not stay to finance host country expansion.
9. Appointment of host country officers and directors.	9. Use of home country officers and directors to prevent development of local outlook in planning and execution.
10. Equity participation by the host country investing public.	10. Creation of wholly owned subsidiaries denies policy determination and earnings to the host country public.
11. Publication of financial reports.	11. Consolidation of host company operating results into parent company statement or failure to publish any relevant information.
12. Support of host country cultural and charitable institutions.	12. Failure locally to support such causes where parent corporations give generously at home.

Source: Adapted from Ashton [1968, p.57]

labour, used monopolistic power to defeat the local competition, and charged excessive royalty payments for obsolete technology and patent rights, the MNC had also to endure real interference in its internal business by being forced to comply with sudden host country demands, which sometimes led to traumatic cases of expropriation and nationalization.

The eighties

It is difficult to comment on the overall atmosphere towards the MNC in the present decade, since the few years already elapsed can only provide trends. However, the characteristics of the portion of the 1980s lived so far are different enough from those of the previous decade to justify a separate comment.

The 1980s started with a deep global recession which was only second to the Great Depression of the 1930s [Root, 1984]. Despite the strong but uneven recovery of the world economy in 1984 and 1985, the effects of the recession, which have not been totally overcome, moulded, and will continue to do so, the attitudes of both industrialized and developing nations towards the multinationals.

In the developing world, a combination of adverse factors created a situation in countries characterized by mounting foreign debt, and the inability of governments to meet the interest obligations let alone repaying the loans. The amounts involved are phenomenal. In 1984, developing countries had an external debt of \$800 billion, which constituted more than half of the money owed to the world's banking community [Dymsza, 1984b]. Difficulties in complying with the contractual obligations to the creditor institutions, were mainly due to a depressed international demand for the countries' major export products (in many cases commodities), the consequent fall in prices in these products, and the rising interest rates on the countries' foreign debts. As a consequence, nations found themselves short of cash, unable to import essential goods, and, sometimes, even impeded to exploit their own natural resources.

This unfavourable conjuncture for developing nations, coupled with the realization that relationships of dependence cannot be so simply overturned [Gulley and McGill, 1984], led governments to seek more eagerly foreign direct investments. Until the debt crisis broke out borrowing was preferred to foreign investment as a way of getting capital. Loans could be channelled to the investments the country wanted, and no foreign interests had to be satisfied. Countries were seen in control of their own destinies, and that was hoped to pay political and economic dividends locally. With the general inability of obtaining new international bank loans, however, countries have had no alternative but to liberalize their policies on foreign direct investment. Clear signs of change have emerged everywhere. For example, India and many African countries which traditionally posed firm obstacles to foreign company entry, are now spending a considerable amount of effort to attract foreign investment [Kristof, 1985]. Similarly, in Latin America the mood has changed and is now much more welcoming for multinationals. In particular, the Decision 24 of the Andean Pact countries - Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela - promulgated in 1971 with the purpose of curtailing the presence of MNCs in the region is rapidly disintegrating as these countries are entering negotiations with the U.S.A. with a view to an increase in the flow of inward direct investment [ibid.].

Meanwhile, in the industrialized world the widespread recession was to leave countries with deep problems of unemployment, balance of payments deficits, and sometimes an ageing industrial structure which rendered a country uncompetitive. Here, too, many countries have played an active role in encouraging foreign direct investment on technology agreements that enhance their technological capabilities and provide them with new jobs and exports [Dymsza, 1984]. Even countries seen not so long ago as particularly difficult for the MNC, like Canada and Australia, now present themselves as keen hosts for foreign investment [Kristof, 1985]. Sectoral controls or restrictions exercised by a number of OECD countries in areas of economic activity such as banking, insurance, air transport, communications, tobacco, energy, and natural resources have been gradually opened to foreign ownership. Screening procedures on inward foreign investment, and

performance requirements on foreign enterprises have been relaxed. In general, governments are now more than ever willing to offer MNCs wide incentives and concessions. Specialized bodies created by governments with the purpose of attracting foreign companies promote aggressively their countries as recipient of investments. Examples in Europe include the Scottish Development Agency, the Irish Development Authority, and the Portuguese Foreign Investment Institute which have been particularly visible in putting their messages across.

The implication of this state of affairs for the MNC is one of increased opportunities. Multinationals' activities will evolve in a scenario marked by an increasing globalization of the markets, and by a new world industrial map. The new map will emerge from a migration of mature industries in the direction North - South, and from the eruption of a new generation of industries in the North [Root, 1984]. Markets will expand especially in the newly industrialized countries, such as Brazil, Mexico, and South Korea, and the massive market potential of the People's Republic of China will present interesting opportunities and challenges to the MNC. Simultaneously, competition among multinationals will continue to increase as more and more corporations from the OECD take the international route and as MNCs from the Third World grow in number (for a discussion of the latter, see Wells [1983], and Rall [1983]).

In summary, the 1980s have seen so far a cautious return to an atmosphere more favourable to the MNC. Nations across the globe, developing and industrialized alike, appear to be opening their doors more widely, and offering an increased number of incentives to foreign direct investment in the hope of attracting the capital, jobs, and technology that MNCs can provide. Such a more favourable atmosphere does not imply that international actors in host countries stopped worrying about the impact of MNCs on their economies, cultures, and sovereignty [Dymsza, 1984b]. What it simply shows is that governments are prepared to adopt a much more pragmatic attitude freed from the demagogy so characteristic of the late 1960s and the 1970s. The scenario that multinationals will face in the future will offer new challenges and opportunities, which in order to be turned in the MNCs' advantage will require them to adopt novel management approaches and

techniques. As Franklin Root remarks:

"The emergence of a new industrial map [...] challenges to a far higher degree than ever before the capability of managers to cope with political, economic, technological, and competitive discontinuities in the global environment. We can expect much more emphasis on environmental scanning, early warning systems, and contingency plans to strengthen proactive corporate strategies." [1984, p.23, emphasis added].

3.2.4. Summary

Companies whose operations transcend national borders are subject to a multitude of environmental frameworks which represent the hallmark of international business. The MNC is a particular form of doing business across national frontiers and the most elaborate too. Viewed as a system, the MNC is formed by a network of operating units (subsidiaries) located in more than one country and linked to one another by flows of capital, goods, services, people, technology and information. Such inter-subsidiary flows are a result of the fact that the units of a MNC are normally subject to the control of headquarters, and tied up by common resource allocation criteria and a common strategy. Besides these international flows, the MNC system also involves the emission of flows of goods, services, salaries, taxes, payments, information, pollution, and others into the particular country where each subsidiary operates. In this respect subsidiaries behave as any domestic company. However, because the MNC by its very definition has operations in more than one country each unit of the system is influenced by a unique set of economic, political, legal, and socio-cultural factors, whose comprehension by managers at the centre of the system is vital. This section presented a model of a MNC system which contemplates all these elements. In addition, the model incorporates those regulations and controls to a free movement of international flows that are imposed by nations and which reside in the international sphere of each domestic environment. Also, the model contains those institutions that, overlapping countries, play an important role as regulators of international economic activity.

After setting a framework for understanding the nature of the multinational business, the present section discussed the changes in environmental conditions that are likely to occur across the geographic location of a MNC's subsidiaries. A review of the external environmental conditions faced by a MNC would be incomplete without a characterization of the overall atmosphere towards multinational business to be found in both home and host countries. Such an atmosphere reflects on a world scale attitudes towards MNCs and conditions forced upon their operations at home and especially abroad.

Over time, the overall atmosphere towards multinational business changed in ways that are greatly relevant to the development of the MNC. The section discussed such changes, identifying three periods since the second world war. Basically, the first period ranging from 1945 to the late 1960s was marked by conditions highly favourable to the rapid growth of the MNC (mainly U.S.-based). Stability in the international environment was predominant ; natural resources were ready to be explored without great demands being made by host governments ; nations were eager to attract foreign direct investment and imposed little or no restrictions on the operations of multinationals. The second period corresponding to the end of the 1960s and all the 1970s was characterized, in contrast, by a high turbulence and uncertainty in the geopolitical and economic environments, and by new attitudes both in host and home countries generally hostile to the multinationals. During the period, natural resources became scarce due to political reasons; the international economic order broke up in high rates of inflation, widespread currency fluctuation, and increased economic protectionism; confrontations between host countries and MNCs emerged frequently, leading sometimes to expropriation; demands on multinationals and restrictions to their activities became the norm rather than the exception. The third period - 1980s - appears to indicate a return to a more favourable international atmosphere towards multinational business. Developing countries faced with a huge external debt and being unable to obtain new international bank loans turn to foreign direct investment as the only alternative to attenuate internal problems of shortage of cash and investment. Similarly, in the

industrialized world foreign direct investment is keenly sought as a means of improving countries' technological capabilities and of providing the jobs and exports that the economies lack. This scenario presents increased opportunities to the MNC, whose activities will evolve amidst an increasing tendency towards globalization of markets, a new world industrial map, and a stiffening of competition deriving from the entrance of more and more corporations in the international scene. The new opportunities offered to the MNC will present challenges which will require the adoption of novel management approaches and techniques.

3.3. Strategic Management as a Response to the Multinational Environment

3.3.1. The Nature of Strategic Management

According to a large and well established body of normative literature, the direction taken by a corporation in the development of its activities over time should be conditioned by a pre-established decision making framework derived from the application of the strategic management concept. In an attempt to mould the future of the organization management sets corporate objectives and endeavours to put forward courses of action that may enable the achievement of such objectives. This principle inspired the development of the notion of strategic management which in its simplest form can be defined as **"a stream of decisions and actions which leads to the development of an effective strategy or strategies to help achieve corporate objectives"** [Glueck and Jauch, 1984, p.5].

The word strategy suggests two fundamental operations. One is the matching of the activities of an organization to its resource capability [Johnson and Scholes, 1984, ch.1]. The other, most important to the present study, is the matching of an organization's

activities to the environment in which it operates [ibid.]. Such an environment encompasses factors outside the firm which can lead to opportunities for or threats to the firm. As it was discussed in the previous chapter, the environment external to an organization is subject to varying degrees of uncertainty. Strategy can be regarded as part of such an activity, since by analysing a given situation with a view to act strategically management is attempting to reduce the many environmental influences to a pattern which is capable of being understood and acted upon [Johnson and Scholes, 1984, ch.3].

The level of uncertainty contained in a given environment is dependent on its degree of dynamism and degree of complexity. The more environmental conditions are dynamic or the more they are complex the more uncertain the environment is likely to be perceived [Duncan, 1972]. Companies face varying degrees of environmental dynamism depending on the characteristics of their relevant environments. Never is an environment absolutely static. In effect, changes occur continuously, sometimes in a gradual and smooth way (although at different paces), other times in a sudden and troublesome fashion. Therefore, if the formulation of strategy is concerned with matching the capabilities of a firm to its environment, there is the need for a continual process of adjustment and modification of the firm's existing strategy as changes in the environment occur. The underlying idea that strategy is an adaptive process which leads organizations into seeking to respond to changes in their external environments, is emphasized in the following quotation:

"First and foremost, strategy has to do principally with things external to the company rather than internal to it. It is generally because of the external environment and its ever-changing nature that we are so concerned with strategy formulation. Were it not for these changing conditions, their impact upon the company and the presenting of opportunities to it, our strategy would be relatively simple and unchanging." [Collier, 1968, pp.101-102].

Contrary to what is sometimes believed, strategic changes motivated by the necessity of organizations to adapt to the environment in transformation do not necessarily take place as one-off major changes. In effect, there is increasing evidence to show that, more typically, strategy formulation takes shape through a set of decisions which are

made over time in a piecemeal fashion, and which build up to form the strategy of an organization [Johnson and Scholes, 1984, ch.2]. This constitutes the so-called incrementalist view of strategy formulation. As Mintzberg [1978] and Quinn [1980a, 1980b] demonstrated, strategy formulation can best be described as a pattern in a chain of decisions, rather than one major decision made at a point in time and then put into action. Naturally, if the changes in the environment are gradual and smooth the firm can afford an equally gradual and smooth change in strategy. Pattern A in Exhibit 3.IV depicts this situation, where the firm succeeds to keep itself in line with the changing environment.

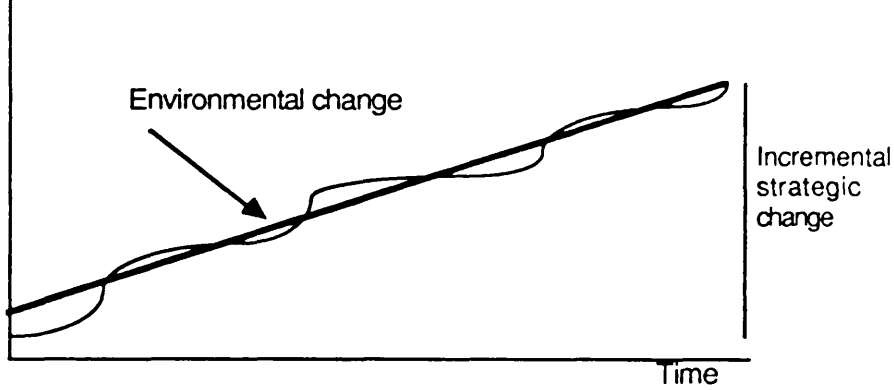
However, there are certain occasions in which the conditions in the environment suffer a sudden and unexpected change. If a firm under such circumstances keeps changing its strategy only in gradual shifts it may find itself completely unadjusted to its environment. Here, a major strategic change over a relatively short period of time may be needed in order to reposition the company in face of the new conditions of the environment. This is represented in Pattern B of Exhibit 3.IV. A third situation, as Johnson and Scholes [1984, p.29] point out, may arise when attempts to keep in line with environmental changes through incremental development fail. This failure could be due to reasons such as moves in strategy in the wrong direction, moves that lagged behind the environmental changes taking place over a long period of time, or moves in strategy which did not succeed in catching up with changes in the environment happening at a greater pace than normal. Whatever the reason causing the discrepancies between the environmental posture and the company's strategy, it is likely that a major strategic change instead of an incremental one will be required to put things right. Pattern C in Exhibit 3.IV refers to this particular situation.

As seen before, not only the degree of dynamism in the environment contributes to its level of uncertainty. Also the degree of complexity does. Complexity is at its highest in MNCs due to the sheer diversity of environmental influences faced by these companies. The MNC is confronted with a total environment which is the more complex the higher is the number of countries where the company

Exhibit 3.IV - Three Patterns of Strategic Change to the Environment

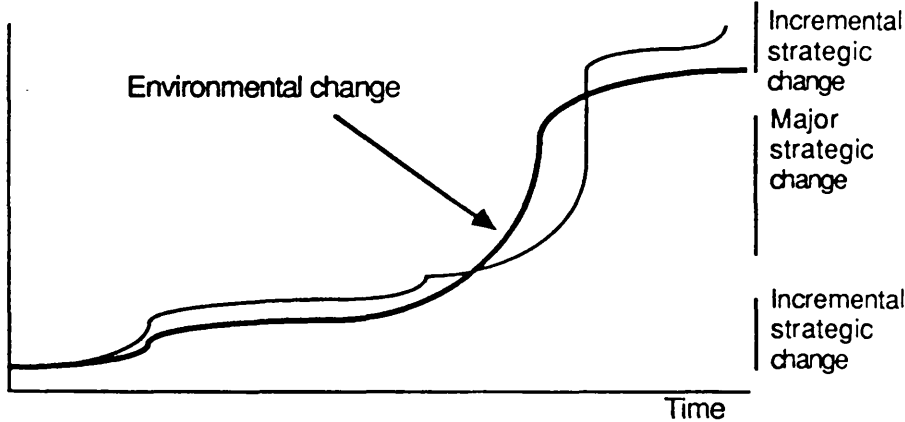
Pattern A

The environment changes gradually and organization strategy develops incrementally with it



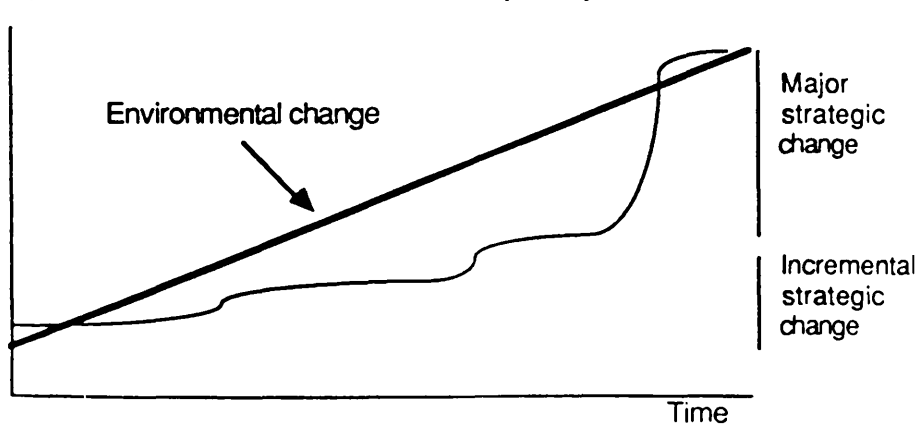
Pattern B

There is sudden environmental change requiring a major strategic readjustment



Pattern C

The environment changes gradually but organization strategy fails to develop in line with it until such time as a major readjustment is needed



Source : Johnson and Scholes [1984, p.30]

operates, and the larger are the differences in nature between such countries. Furthermore, different subsidiaries of a MNC may experience varying degrees of dynamism in their local environments. The combination of high level of complexity and differing degrees of dynamism in the typical total environment of the MNC, normally makes this type of company exposed to extremely high levels of uncertainty. Consequently, the strategy of the MNC as regards the matching of its activities to the total environment in which it operates is likely to be fraught with difficulties and to involve conditions that are not to be found in companies that only operate in a domestic setting. The next sub-section will discuss the major issues which frame strategic management in MNCs, and which are particular to this type of companies.

3.3.2. Multinational Strategies

Strategic management in MNCs is conditioned by the pressure of two vectors which often operate in opposite directions. One of such vectors is of an economic nature and represents the need for a company to become and stay competitive and efficient on an transnational basis. The other vector is of a political nature and reflects the necessity of a company to respond to demands and incentives of individual host governments [Doz, 1980]. These two vectors frame the development of a corporation in the international scene and shape its approach to the overall organization of activities on a world basis. In this context, multinational strategic management offers an analytical framework that guides companies in the employment of their resources - capital, management, personnel, technology, managerial know-how - in an efficient way to attain corporate objectives [Dymsza, 1984a]. Besides helping to explore opportunities presented to companies worldwide, multinational strategies are also intended to reduce threats, uncertainties, and exposure to risk, as well as to contribute to greater competitive efficiency, and higher profitability around the world [ibid.].

Fragmentation versus unification in the pattern of international operations

In general terms, the formulation of the strategy of a MNC involves the consideration of a multitude of influences which will lead the company into either fragmentation or unification in the pattern of operations [Fayerweather, 1982, ch.1 and pp.210-213]. Fragmentation involves highly decentralized and autonomous foreign units often in companies organized in a holding structure. The primary ties between central headquarters and individual subsidiaries are mainly financial, and the transmission of non-financial resources, such as technology and marketing expertise, from parent to affiliates are usually given little emphasis [Davidson, 1982, ch.1]. Autonomy and decentralization of decision making enable a high level of responsiveness to local markets, but do not promote coordination with other organizational units to share resources and costs, nor do it foster an integrated perspective on the objectives and problems of the organization [ibid].

In contrast, unification of operations involves the transmission not only of financial resources but also of technology, brand names and marketing skills, information, management expertise, components, final products, only to cite a few. Decision making regarding the distribution of the resources transmitted is highly centralized in the parent company, and the level of control over the use of such resources by subsidiaries is equally high⁽³⁾. Costs are shared among individual units, and manufacturing as well as other activities such as research and development (R&D) are tightly coordinated from the centre. Unification of operations does not lend itself to as much responsiveness to local markets as fragmentation. However, by adopting a global centralized approach to management of the company, the MNC is able to capitalize on its potential advantages of size and sophistication as compared to purely domestic, smaller firms. According to Fayerweather [1982, p.211]:

"[the influences which push a company into unification of operations] represent a substantial portion of the basic rationale for the existence of the MNC and the source of a considerable part of its competitive advantage. [... In effect,] the possibilities for economies and the greater efficiency available to the multinational lie largely in capabilities for specialization of activities in individual

units with substantial interchange among them and are therefore dependent upon a high degree of uniformity in the activities of the units composing the structure."

Forces influencing fragmentation and unification

The forces leading into fragmentation or unification in the organization of the international pattern of operations in a MNC may be classified in two distinct categories, according to their economic or political nature (see Exhibit 3.V). Yves Doz [1980] has called attention to such a distinction and argues that the evolution of the MNC in the recent past has been characterized by the need to respond to both economic imperatives and political imperatives.

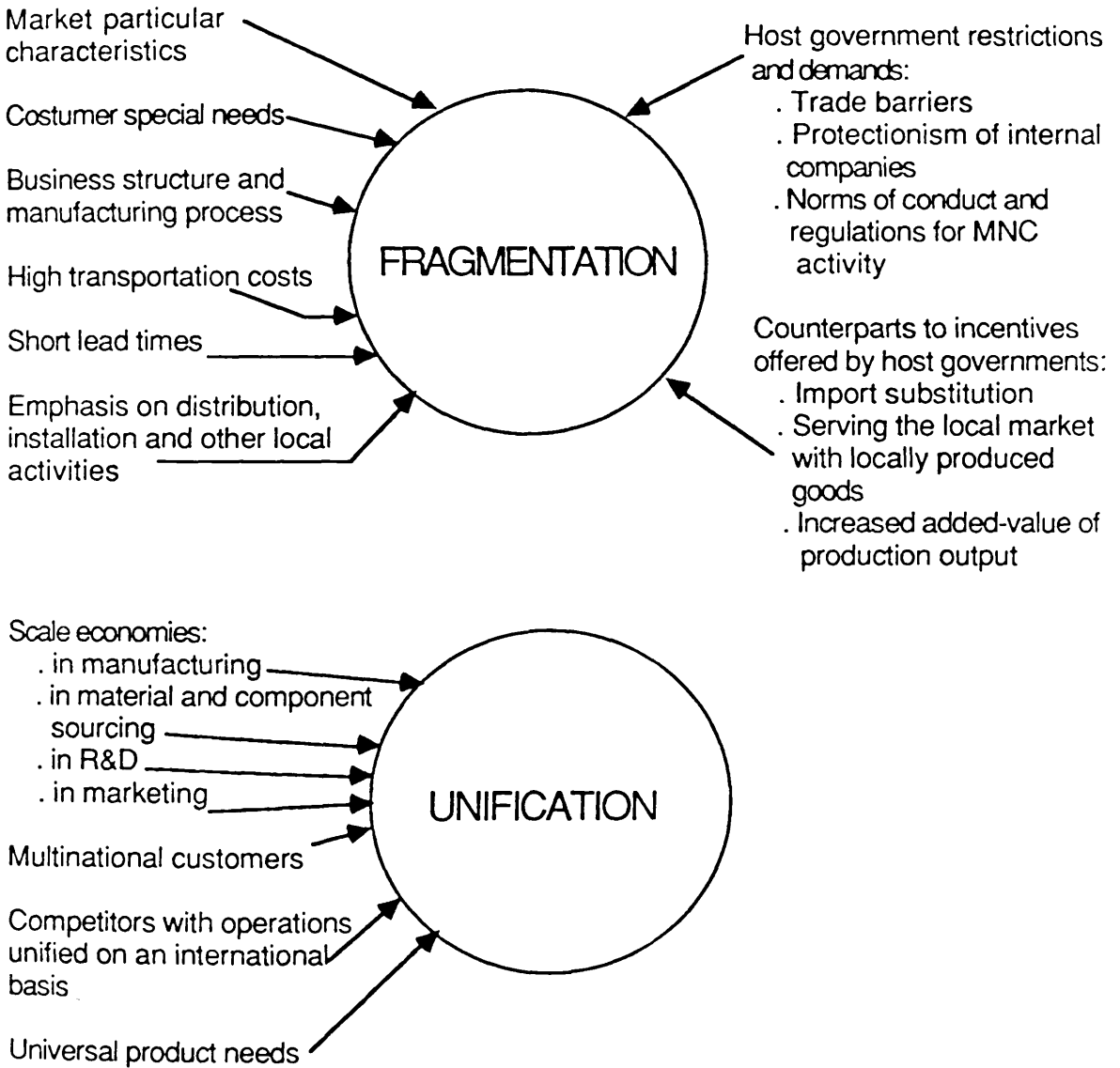
A large number of economic factors condition the organization of the activities of a multinational. Some of these factors push a company into fragmentation of operations. Others, lead into international unification (Exhibit 3.V). Fragmentation is highly motivated by the diversity in market conditions found in various countries of operation (see for example Doz and Prahalad [1984]). Particular market characteristics and consumer needs may require products that differ greatly among countries. Similarly, high transportation costs, short lead times, and emphasis on distribution, installation and other local activities represent an incentive for the MNC to serve each market on an independent basis. Fragmentation may also make sense in businesses whose structure do not favour economies of scale in manufacturing or a centralized R&D activity (Exhibit 3.V).

In contrast to these economic factors influencing fragmentation of international operations, other factors, also of an economic nature, may take the MNC in the opposite direction. Unification in the pattern of worldwide operations is induced by the availability of substantial economies of scale, not only in manufacturing process but also in material and component sourcing, R&D and, sometimes, marketing. Similarly, the existence of multinational customers making purchases on a supra-national scale, and of direct competitors whose international operations are already organized in a unified manner, tend to contribute to a company's unification of operations (Exhibit

Exhibit 3.V - Forces Contributing to Fragmentation and Unification in a Company's Pattern of International Operations

Economic Imperatives

Political Imperatives



3.V). Despite the importance of these latter factors, economies of scale are, however, the most powerful argument in favour of unification. For this reason, the different types of scale economies and the way they influence unification of international operations will be discussed next.

Scale economies in manufacturing arise from the concentration of production and provide low unit costs through high volume in capital-intensive facilities. Associated with such a set up is a consistently high product quality achieved through automation and centralized quality control. The studies of the Boston Consulting Group (BCG) have demonstrated the importance of scale economies in the reduction of unit costs. Costs per unit of a product are said by the BCG to be influenced by an experience curve which is dependent not only on scale of operations, but also on the learning function, and the level of specialization [BCG, 1974; Hedley, 1977; Grant and King, 1979]. According to the studies carried out by the BCG both in Europe and the U.S.A., each time experience, measured in terms of cumulative units produced in one location, doubles unit costs decline between 20 percent and 30 percent net of inflation [ibid.]. Scale economies in manufacturing are maximized in the extreme case when production of a final product is concentrated in a single world-scale facility. This approach has been frequently utilized by Japanese companies [Davidson, 1982, ch.5], which from volume-oriented, capital-intensive factories at home, manufacture standardized products for shipment to world markets.

Scale economies in material and component sourcing arise from centralized or coordinated (decentralized) buying which enables high-volume purchases. These open the possibility for a company to profit from quantity discounts and to use sophisticated information networks which are able to scan the world for the best items and the best prices. Scale economies in R&D are associated with the existence of world products ("high-touch" products in the terminology of Levitt [1983]), and derive from the possibility of concentrating the research and product development activities of a company in one location. High levels of R&D occur in high-technology businesses which, as it has been demonstrated in the literature [Vernon, 1966; Keesing, 1967;

Gruber, Mehta and Vernon, 1967; Severn and Lawrence, 1974], show a marked tendency to have high levels of export and foreign investment. Therefore, it is likely that in many MNCs R&D is an important activity offering scope for substantial economies. Finally, scale economies in marketing are also associated with world products, and arise specially when the same advertising campaigns are designed to be used in a number of countries, instead of the more common situation of having campaigns with different characteristics for different countries. Clearly, global campaigns must assume that the world, or at least a large region, is a sole market with uniform characteristics, and this does only make sense in a very limited number of cases. Nevertheless, there have been considerable efforts both on the part of academics [Levitt, 1983a, 1983b] and on the part of advertising agencies [see Fisher, 1984] to push for the idea of global marketing. So far, some successful cases include the marketing of soft drinks and computers. However, a major departure from the so-called "marketing concept" [e.g. Kotler, 1984, ch.1] should be regarded with extreme caution.

The forces contributing to fragmentation or unification in the pattern of international operations in a MNC are not exclusively economic. Also, forces of a political nature may influence the way in which a company's network of operations is organized. The political imperatives which condition the organization of the activities of a MNC generally push the company into fragmentation of operations (see Exhibit 3.V). The political forces shaping the evolution of the multinational stem from the fact that the world is divided into separate units, each claiming sovereignty over its territory and imposing a set of rules to which the MNC must abide by. The political forces include a large number of specific requests and general demands made on international companies by host governments. These have largely been discussed in section 3.2. and comprise factors such as high import duties and other international trade barriers, internal protective and subsidized trade practices, norms of conduct and regulations applied to MNC activities. In their response to the political imperatives, multinationals do not face only restrictions on the part of host governments. In effect, many countries are more than eager to attract foreign investment and offer a number of incentives (e.g. reduced taxes, capital at low interest rates, land to build

plants), whose counterparts (e.g. serving the local market, substituting imports) sometimes may impede unification of a company's operations across national borders.

The incentives for fragmentation and unification vary largely with the type of industry. In some businesses, the economic imperatives are such that fragmentation of operations is the adequate form of organizing international activities. This is the case, for example, of the food industry and other consumer nondurable businesses where products differ greatly among country markets due to varied national tastes, where economies of scale available are insufficient, and where products are perishable goods which do not stand long transportation. This is also the case of the steel and cement industries where transportation costs offset any scale economies available, and of fashion-oriented industries and many service businesses where lead times are short and economies of scale are unavailable (for a comprehensive list of industries, see Davidson [1982, pp.6-7]). In contrast, in many other industries the economic imperatives require companies to unify international activities. These are industries generally in high and medium technology fields presenting very substantial economies of scale to be explored on a transnational basis. Examples are automobiles (see, for example, McMullen and Megna [1982], for a discussion of the world car concept), computers, civilian aerospace, electronic consumer goods, tyres, construction machinery [Davidson, *ibid.*], and chemicals [e.g. Read, 1984].

In the industries whose economic imperatives favour fragmentation, the political imperatives can easily be met, and no conflict between the two will arise. However, in industries where there is a strong economic incentive for unification of international operations, the political pressures lead MNCs in the opposite direction, and a conflict between the economic incentive to unify and the political pressure to fragment is likely to emerge. Strategic management in multinationals evolves around the need for a coordinated response to these economic and political stimuli, in order to capture the highest possible economic advantages with the minimum political disruption and interference. A comment on the strategies of MNCs at the light of such stimuli is the object of the discussion that follows.

Strategic response to the forces for fragmentation and unification

The consideration of the relative importance of the particular economic and political imperatives influencing the international activities of a company should determine the type of strategy adopted. As it was just seen above, there are forces inherent to the very nature of the multinational business activity that exert pressure into fragmentation or into unification of a company's pattern of international operations. Frequently, pressures to unify and to fragment co-exist within a MNC. In order to achieve successfully corporate objectives, management must, therefore, decide to which pressures the company should primarily respond. As Doz and Prahalad [1984] point out, very seldom can a clear-cut, exclusive, choice between the two modes of international organization be made. They argue that such choices are not of the "either-or variety" but involve difficult trade-offs in the extent and form of organization to be found in the balance between fragmentation and unification [p.56].

Having this in mind, three multinational strategies can be defined. They are the segmented nation-for-nation strategy, the global integration strategy, and a mixed strategy carefully balancing the previous two⁽⁴⁾.

The segmented nation-for-nation strategy is consonant with fragmentation of international operations. Companies may adopt this strategy because it is the only one applicable to the characteristics of the industry where they are in. In these cases, the economic imperatives have the same impact on the companies as the political imperatives, and no incentive for unification exists. On the other hand, there may be companies adopting the segmented nation-for-nation strategy that are subject to opposite forces for fragmentation and unification, as it was discussed above. In such cases, companies forgo the main economic benefits of unification and respond mainly to the political imperatives. Consequently, the formulation of segmented strategies may be dominated by either political imperatives, economic imperatives, or both simultaneously. In industries where local

governments play a key role, as in the case of telecommunications, nuclear engineering, and electrical power, political considerations are paramount in setting up a segmented strategy (for a discussion of strategic response to political imperatives, see Doz [1979]). In contrast, in industries where governments do not play an important role, such as food processing and fashion, the formulation of segmented strategies responds more closely to economic imperatives that call for differentiation in the local markets (for a discussion of strategic response to imperatives of economic differentiation, see Wiechmann [1974]).

Generally, a segmented nation-for-nation strategy is characterized by a high level of decentralization. Foreign subsidiaries are strategically independent of one another and have large autonomy from central headquarters. This means that the MNC that pursues a segmented strategy is composed of a number of foreign units which act in the local markets as if they were independent national companies. Such units have separate strategies, highly adapted to the local markets, and know-how and other resources of the group are called upon only when the subsidiary management finds them necessary [Doz, 1980]. Subsidiaries are only loosely controlled by the parent, and they tend to be regarded as profit centres expected to contribute earnings and growth in relation to respective local market opportunities [Hout, Porter and Rudden, 1982]. In a segmented strategy, manufacturing is usually organized on a nation-for-nation basis, with local plants substantially independent of each other, and with low levels of intersubsidiary transfers. Sourcing of materials and components is decided independently by each subsidiary. Also, often R&D is spread over local operations being difficult to avoid duplication of efforts, especially when host governments insist upon local research and product development on specific projects for which government sponsorship is available.

In sharp contrast with the segmented nation-for-nation strategy lies the global integration strategy. Global integration is akin to unification of international operations. Companies adopting this strategy give priority to the economic imperatives that motivate them to unify and integrate multinational activities. However, by

responding first to the economic forces for integration, companies have to stand the pressure of the political imperatives that require them to be nationally responsive and internationally fragmented.

Behind the global integration strategy lies a view of the MNC as a system of well-articulated and multi-dependent parts transcending national borders. To satisfy the logic of the global strategy, companies have sometimes to take decisions which, regarded independently, may seem uneconomic, but which will eventually produce major benefits for the corporation as a whole. As Hout, Porter and Rudden [1982] point out, managing a business globally demands a number of unconventional approaches such as the adoption of investment projects with zero or even negative internal rates of return⁽⁵⁾, the introduction in some markets of product lines deliberately overdesigned or underpriced, and the adoption of a view of individual market positions as interdependent, rather than independent elements of a worldwide portfolio to be increased or decreased in accordance to profitability [p.99].

The rationale for an integration strategy resides in the factors that compel a MNC into unification of activities on a global scale. As discussed above, the availability of unexplored scale economies plays a dominant role in leading a company to unify operations. The response to the incentives to explore economies of scale on a cross-national basis requires MNCs to centralize decision making and to have a coherent and highly integrated strategy involving the whole network of foreign operations. Decisions regarding manufacturing, sourcing of materials and components, R&D, and sometimes marketing are made centrally by headquarters for the whole of the multinational network. Under this set-up, individual country subsidiaries are highly interdependent in terms of activities and are all subordinate to one company overall strategy. As a result, each subsidiary may specialize in producing only part of its product line, exchanging products with other subsidiaries in the international network (an analysis of how far a MNC can take global rationalization of production is made by Doz [1978]). Similarly, subsidiaries may specialize according to different stages in the production process in a way in which the advantages of different countries in terms of availability and cost of

production factors - raw materials, labour, energy, technology - is explored in full (authors like Kogut [1984] view the activities of a MNC as a "value-added chain" and argue that the formulation of strategy in these companies consists in the placing of "bets" in the links of the chain). A consequence of the high levels of interdependence among units in a global integration strategy is the existence of a large volume of components, semi finished, and finished products being moved across plants located in different countries. The management of such a complex system of interrelationships requires tight levels of central control and the close monitoring of subsidiaries' activities. The evaluation and control of foreign operations should rely on key indicators linked to the critical functions of each subsidiary, making the assessment criteria used by headquarters management particularly varied and less dependent on profit-based targets.

Within the global integration strategy different marketing approaches to local markets may be taken. Some authors [e.g. Levitt, 1983a, ch.2; 1983b] contend that the full benefits of a global strategy can only be achieved when corporations succeed in standardizing products worldwide. Based on the premise that for a certain number of products preferences and national tastes are homogenized across nations (such an idea is imbedded in Levitt's "Republic of Technology" concept), this approach views the world as one sole standardized market, instead of as many customized markets. It should be noted, however, that such an approach does not mean that companies should offer a single product version worldwide. In effect, in the same way as domestic corporations ought to recognize different segments in a market, also global MNCs have to be able to identify market segments and provide differentiated product lines. Standardization of products occurs, therefore, within segments that are viewed as similar across the world market. In contrast to this position, a number of authors [e.g. Kogut, 1984] argue that a global integration strategy can accommodate some differentiation in products across country markets. Rejecting the idea of world homogenization of consumer preferences, this approach attempts to demonstrate that substantial economies from integration may be possible when the variables of the marketing mix are changed to suit local markets. This would be so provided that

upstream opportunities in the production process are exploited by linking shared resources on an international basis.

An important aspect in the definition of a global integration strategy is that the degree of unification of a company's international activities may be determined by considerations of risk originated by the vulnerability of the company to disruptions in units of the network, and to sudden alteration of the premises on which the decisions to invest were based. In the extreme case of a MNC which tries to capture all the scale economies available by concentrating sourcing and manufacturing in units for which there is no back-up, one single problem in any of the units is likely to have a significant impact on the whole of the company. In fact, when a corporation does not possess multiple sources for key items it allows itself an extreme vulnerability to contingencies such as strikes and other labour problems, transportation disruptions, host government import restrictions, and even currency appreciation. The level of integration in a MNC strategy has, therefore, to equate increases in production efficiency available through concentration with increases in the vulnerability of the corporation arising from such a concentration.

In between the contrasting strategies of nation-for-nation segmentation and global integration lies a third strategy that carefully combines elements of both. This mixed strategy that Doz [1980] terms administrative coordination strategy is characterized by the lack of a priority given to pressures to unify or to fragment international operations in a MNC. Companies in this situation, being subject to conflicting economic and political imperatives are unable to make a clear choice as to which set of influences they should respond first. As a result, corporations adjust to circumstances in a manner that is deemed adequate for each particular situation, without attempting to integrate the adjustments into a consistent comprehensive strategy. Doz [1980, p.29] describes this approach to multinational management in the following terms:

"Instead of taking a stable proactive stance vis-a-vis the environment and relying on the chosen strategy to provide a framework within which to deal with sources of uncertainties and to make specific decisions as the need arises, companies

using administrative coordination absorb uncertainties and try to resolve conflicts internally each time new uncertainties question prior allocations of strategic resources. In short, strategy becomes unclear, shifting with the perceived importance of changes in the economic or political environment, and it may become dissolved into a set of incremental decisions with a pattern which may make sense only ex post."

A mixed segmented-integrated strategy, although not providing a clear and positive strategic direction, enables a fair degree of internal flexibility which allows companies to respond to governmental requirements in certain cases while maintaining some degree of integration in others. Indeed, flexibility appears as the distinctive purpose of the mixed strategy which, compared with global integration, constantly trades off internal efficiency for external flexibility [Doz, 1980]. An important element in subsidiary flexibility is the less tight control exercised centrally on the units composing the MNC network. This, understandably, facilitates subsidiaries' response to host country requests and enables them to participate in projects jointly with local partners such as government agencies and state owned enterprises [ibid.].

As the discussion so far has suggested, MNCs for which economic pressures for integration are significant face a wide choice of strategic postures whose extremes would correspond to a complete fragmentation of operations, on one side, and to a global worldwide unification of operations on the other. The next paragraphs will discuss in more detail relevant factors that influence the choice of strategy by multinationals subject to economic forces that compel them into integration.

Choosing a multinational strategy

To start with it should be noted that the choice made by a company of a segmented nation-for-nation strategy or of a global integration strategy does not necessarily imply that the company has to practise the same strategy to the whole of its international operations. What it does mean is that there is a dominant strategy being preferred by the corporation and which applies to most of its subsidiaries. In

fact, due to different trade restrictions and regulations for an industry among countries, it is practically impossible to avoid the existence of subsidiaries whose strategies deviate from the dominant company strategy.

Another point to be made is that global integration strategy is compatible with unification at the regional level. In other words, global integration may be conceived as a system of major geographic blocks within which high levels of interdependence are achieved, rather than as a universe of operations spread worldwide. Hood and Young [1982, pp.176-182], for example, report the existence of high levels of product or component specialization in U.S. MNCs within Europe. The growing homogeneity of the European market, together with the gradual breakdown of cultural and legal barriers are said to have contributed to U.S. companies viewing Europe, or parts of it (i.e. the EEC and the EFTA), as a large geographic block where integration can be successfully achieved. Also a case of contained integration is the one that exists between the United States and Mexico, here clearly to capture the advantages of a close source of low-cost labour [Daniels, Ogram and Radebaugh, 1982, p.171].

The choice of strategy by MNCs operating in industries for which international integration pressures are high is suggested by Doz [1980] to be dependent on certain factors, namely market structure and nature of the customers, bargaining power of the corporation, size, technology level, and weight of the competition. Market structure is, for this matter, defined in terms of barriers to trade for particular products or industries. Trade barriers and other restrictions can be either openly disclosed by governments or concealed in practices whose real intent is to impede free circulation of goods across borders. Such concealed practices include the use of the market power of state monopolies such as national telephone and postal companies, and electricity and gas companies, as well as the creation of certain legislation on product specification and inspection requirements. The degree of control in foreign trade by host governments varies with the nature of the goods being transacted. Indeed, characteristics of products such as large visibility and high price, as well as their strategic importance for nation-states often influence governments to

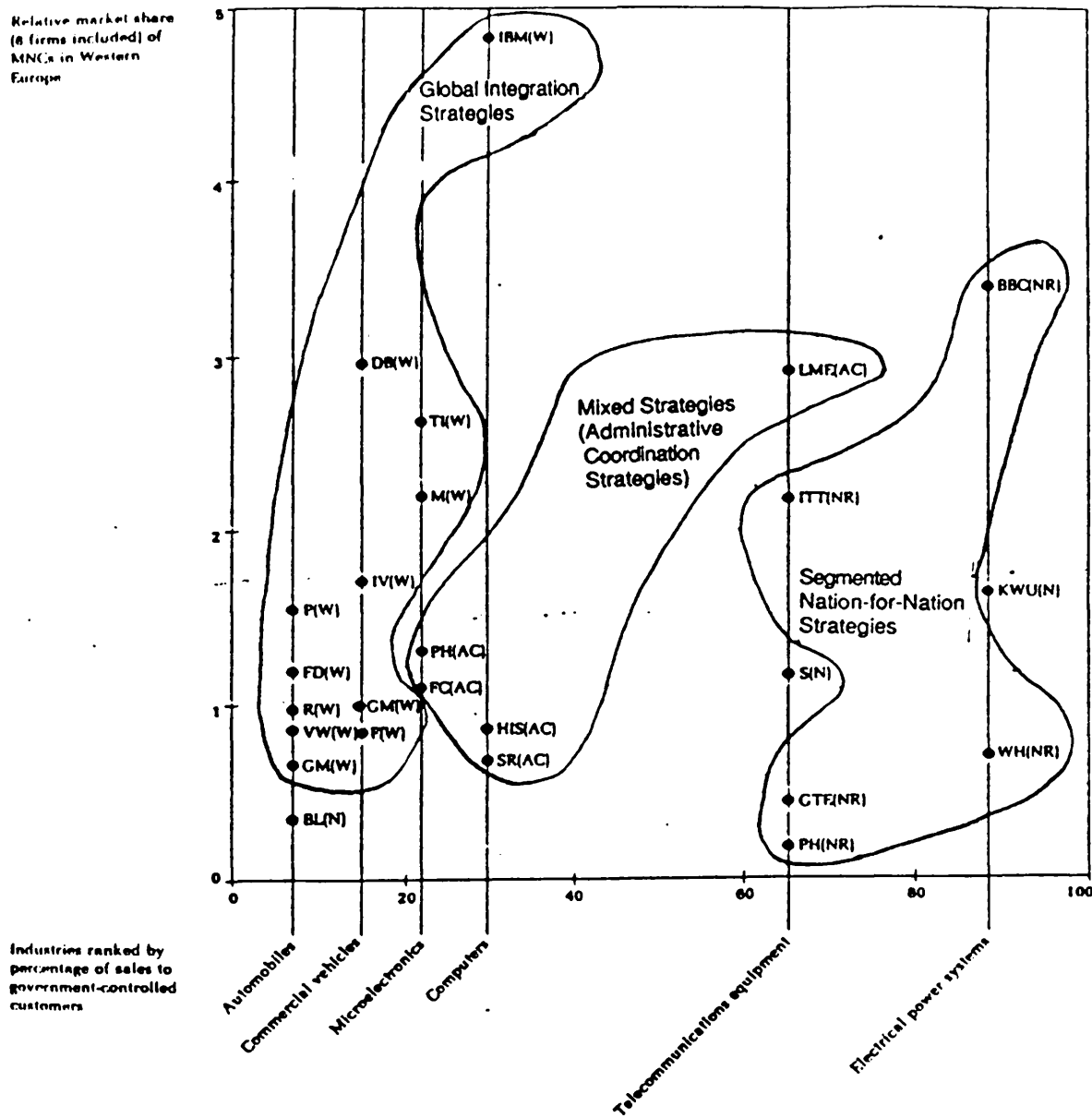
exercise close control over supplies [Williamson, 1975]. Electrical power systems and telecommunications equipment fall under this category, and in industries such as these the political imperatives are likely to be dominant to the point of preventing global integration, making nation-for-nation segmentation the most viable strategy. In contrast, there are industries whose products do not attract so much desire of control on the part of host governments. An example is the motor car industry which is subject to more liberal international trade, enabling MNCs to exploit scale economies and, consequently, adopt strategies of worldwide or regional integration. A third class of industries is situated in between the two mentioned above in terms of government control appetency. As Doz [ibid.] points out, there are businesses such as semiconductors and computers whose markets are partly internationally competitive and partly government controlled. As a result, in these businesses the market accomodates both customers who select their suppliers on economic grounds and customers who, being state-owned or state-influenced entities, show a preference for controlling their suppliers. It is in this class of industries that the choice of a strategy is likely to be most difficult. Faced with equally critical economic and political imperatives, MNCs may opt for global integration in order to achieve international competitiveness, they may opt, alternatively, for segmentation to better respond to governmental demands and so benefit from their support, and thirdly they may opt for not making a clear option, in which case they resort to a mixed segmented-integrated strategy.

Selecting a strategy in such cases where both economic and political imperatives are paramount, is suggested to be determined by the bargaining power of the MNC vis-a-vis its host governments [ibid.]. Bargaining power is possibly given to a firm by its very size, its market share of the industry relative to the shares of competitors, by the level of technology of its products and by the quality of its relations with host governments. In effect, the larger and powerful a MNC, i.e. the more dominant in the market and the more sophisticated and leading its technology, the more likely is the corporation to be able to bargain with governments and to resist their impositions. In such cases, MNCs naturally tend to adopt global integration strategies

because they are capable of handling the political imperatives without having to sacrifice economic efficiency. Moreover, it is in larger firms with higher market shares and with more sophisticated technologies that usually the potential for economies of scale is higher. Therefore, the incentive for integration in such firms is even more marked than in smaller companies, and, as a consequence, they may feel particularly willing to exercise their bargaining power and influence against host governments. Conversely, smaller, less prominent MNCs which could not capture as many economic benefits from integration as the market leaders, find themselves simultaneously in a position where their bargaining power with nation-states is limited. These firms are, thus, likely to find segmented nation-for-nation, or mixed strategies more suitable and will seek host governments' support and subsidies to compete against the leading MNCs [ibid.].

The factors equated above were subject to a tentative empirical observation by Yves Doz [ibid.], whose results are depicted in Exhibit 3.VI. This corresponds to a study of six industries in Western Europe where trade restrictions for each industry are assumed to be relatively constant, and in which the economic and political imperatives are seen to be in conflict. The exhibit ranks the industries in terms of market structure (measured as a percentage of sales to government-controlled customers), and plots a number of companies in each industry according to their bargaining power (measured in terms of market share only). Additionally, the exhibit indicates the strategy followed by each company in the region. The examination of this data provides very interesting results that support the relationships discussed above. As a matter of fact, global integration strategies are found in industries with the lowest exposure to government influence (automobiles and commercial vehicles), whereas segmented nation-for-nation strategies are encountered in the industries that are most exposed (electrical power systems and telecommunications equipment). Mixed segmented-integrated strategies tend to be found in those industries where the number of government-controlled customers is reasonably important but not dominant (microelectronics and computers). Also, it is interesting to verify in Exhibit 3.VI how the bargaining power of a MNC seems to influence its strategy. In microelectronics, for example, the

Exhibit 3.VI - Effects of Government-Controlled Customers and Market Shares in the Selection of a Multinational Strategy



- Legend:**
- 1. Types of Strategies**
are indicated next to company initials:
W: Worldwide (or regional) integration
AC: Administrative coordination
NR: National responsiveness
N: National company
- 2. Company Names**
are represented by initials:
- | | | |
|------------------------|---------------------------------------|---|
| P = Peugeot S.A. | M = Motorola | ITT = International Telegraph & Telephone |
| FD = Ford of Europe | PH = Philips | S = Siemens |
| R = Renault | FC = Fairchild | GTE = General Telephone & Electronics |
| VW = Volkswagen | IHM = International Business Machines | BBC = Brown Boveri |
| GM = General Motors | HIS = Honeywell Information Systems | KWU = Kraftwerk Union |
| BL = British Leyland | SR = Sperry Rand | WH = Westinghouse |
| DB = Daimler Benz | LME = LM Ericsson | |
| IV = IVECO | | |
| F = Ford | | |
| TI = Texas Instruments | | |

Source: Doz [1980, p.34]

companies which have adopted a mixed strategy (Philips and Fairchild) are previously those that present the smaller market shares. The market leaders in the industry (Texas Instruments and Motorola) follow a global integration strategy. Also, in the computer industry IBM is the only corporation included in the study that has a global strategy. The other two (Honeywell and Sperry), with much lower market shares, have to resort to mixed strategies. A similar situation also happens in the telecommunications equipment industry, where the only company that can resist segmentation is the market leader (LM Ericsson) - see Exhibit 3.VI.

Before concluding, a further comment on strategies of global integration is required. It should be pointed out that global integration can be sometimes compatible with the satisfaction of stringent requirements of host governments. In countries where trade barriers are prohibitively high, and markets offer great potential for growth, like in major newly industrializing countries MNCs may have to establish a local manufacturing subsidiary if they want to have a chance to explore the market. However, instead of creating a self-contained subsidiary, the MNC may be able to build a specialized component manufacturing facility which will be integrated in a global sourcing network [Hout, Porter and Rudden, 1982]. By doing this the company can achieve scale economies and at the same time sell locally its product range, provided that the subsidiary is allowed to compensate exports of the component manufactured locally with imports of the final products.

An interesting case of two very different global integration strategies is provided in the motor car industry by some of the Western manufacturers, and by the Japanese producers. Western volume manufacturers, notably the two largest U.S. companies - General Motors (GM) and Ford - practise strategies of worldwide (or regional) integration through a network of production facilities located throughout the world, in order to capture the very large scale economies available in the industry, and, simultaneously, to respond to host government requirements of local production. The cost for such corporations in satisfying political imperatives is the creation of a system which sacrifices some of the economies of scale available.

Therefore, the natural move for these companies is the search for even higher economic benefits of integration, by using more sophisticated global sourcing networks. Indeed, the present strategies of GM and Ford point to the exploration of opportunities in East Asia, specially in South Korea, Taiwan and Japan (see, for example, Kraar [1984]), in the same way as these companies have already started exploring the advantages offered in Europe by Portugal and Spain. In contrast to Western firms, Japanese manufacturers concentrated all their production at home from where they serve the world markets via export. This form of organization constitutes an extreme mode of global integration, which seeks to maximize efficiency by capturing virtually all the available scale economies and by exploring the advantages of the highly productive Japanese system. However, by adopting such a posture Japanese companies let themselves exposed to host government demands, in the sense that they have nothing to trade-off against import quotas and other regulations. The need to respond to such political imperatives, is forcing these companies to give up of some of the economic benefits already achieved, and is taking them into investing in production facilities in large markets such as the U.S. and Europe. In brief, the situation described presents the case of companies which, although operating in the same industry and practising global integration strategies, are forced to move in different directions for the reason that some have to respond primarily to pressing economic imperatives while others must give priority to ominous political pressures.

3.3.3. Summary

Strategic management represents an analytical framework for making decisions in a way consistent with corporate objectives. Companies must employ their resources in an efficient and productive manner and for that they need to adapt with foresight to the ever changing conditions of the environment. The role of strategy is therefore to elicit the most adequate matching of the organization to its environment through a chain of decisions which best explore the organization's resource capability. The environment external to an

organization is subject to a certain degree of uncertainty which management attempts to reduce via careful analysis of key environmental influences. Uncertainty in the environment is defined as a function of its degree of dynamism and complexity.

It is in MNCs that strategic management is more critical, due to the fact that corporations have to deal with many varying degrees of dynamism and a high level of complexity in their total external environment. Complexity arises from an extremely heterogeneous environment, composed of differing country sub-environments comprising the companies' network of operations. The best matching of the overall organization to such a varied and complex total environment within the most efficient use of resources available internally to firms, makes the strategic management process in MNCs particularly problematic and crucial to the companies' survival.

Strategic management in MNCs is fundamentally based on the choice of a pattern of organization for the companies' overall operations, that attempts to conciliate the form in which resources are used most efficiently with the best possible fitting to the characteristics of the environments operated. Such a choice involves the selection of a proper balance between fragmentation and unification of a company's international operations, and derives from the nature and weight of economic and political imperatives that frame the company's activities. Economic imperatives can exert pressure into fragmentation or unification of operations. The latter is motivated by the availability of unexplored scale economies in areas such as manufacturing, material and component sourcing, R&D, and marketing. Unification is also motivated by the existence of universal product needs, multinational customers, and competitors already unified on an international basis. While economic imperatives sometimes attract a company into unification, political imperatives such as host government restrictions and demands, usually push the company into fragmentation. In cases where economic and political imperatives are contradictory, there is an open conflict of interests between the MNC and the nation-states, and it is the role of strategic management to respond to the economic and political stimuli in such a way that the highest possible economic advantages may be captured with the minimum

political disruption and interference.

Multinational strategic management encompasses the choice and consistent practice of one of three major strategies, namely a segmented nation-for-nation strategy which gives priority to international fragmentation of operations, a global integration strategy which prefers worldwide or regional (e.g. EEC) unification of activities, and a mixed segmented-integrated strategy (or administrative coordination strategy) which does not opt first for either pressures to fragment or to unify, rather preferring to constantly compromise and have no coherent strategy (it is in this sense that administrative coordination is said to be the strategy of having no set strategy). In industries where the pressures for international integration are high (e.g. industries with a minimum efficient manufacturing scale involving an output larger than the size of any of the individual markets served), the selection of a given strategy appears to be strongly influenced by the level of control exercised by host governments over the industry, and by the bargaining power of the MNC. The desire of host countries to control an industry in their territory is often reflected in the existence of state owned or government controlled institutions that constitute the major, if not the only, customers of the multinational in those territories. In such cases, companies may have to opt for nation-for-nation segmentation and forgo the economic benefits of integration. Yet, in some cases the bargaining power of a company vis-a-vis national governments may counterweight the political forces for fragmentation and enable corporations to put forward global strategies of integration, or at least resist flat-out segmentation through a mixed strategy.

Whatever the strategy adopted by the MNC, there will always be a need for an alternative surveillance of the environment relevant to the company's operations. If this is important for a corporation practising a segmented strategy, since the premises and conditions on which the strategic posture is based may alter, it is absolutely vital for a company globally integrated, where the impact of an environmental change in one of the units is likely to be felt throughout the whole system. The next section of the present chapter

will discuss such a process of environmental surveillance.

3.4. Environmental Scanning

3.4.1. The Practice of Searching and Diagnosing the Environment

An adequate fit between an organization and its external environment, a major desideratum of corporate strategy, requires the understanding of the scenario in which the organization's activities evolve, and the ability to recognize in it threats and opportunities that should prompt corporate reaction. Understanding the environment and being able to anticipate future changes rather than be a victim of them, requires an activity of collecting and analysing information external to the firm, which constitutes the essence of the environmental scanning process. Scanning, as Aguilar [1967, p.1] defines it, is "the activity of acquiring information [...] about events and relationships in a company's outside environment, the knowledge of which would assist top management in its task of charting the company's future course of action."

The search of the environment external to a company and the diagnosis of the likely impact of significant environmental factors on the company's activities are generally considered in the literature to be a crucial early stage in the strategic management process [Glueck and Jauch, 1984, ch.3]. The normative literature on corporate strategy prescribes a systematic search and diagnosis of the environment to determine which factors present threats to the company's current strategic direction, and also to determine which factors present opportunities for a better attainment of objectives through an adjustment in the company's strategy. Moreover, it is argued that the practice of environmental search and diagnosis helps managers to create an early warning system to identify potential threats, and gives managers time to anticipate opportunities and to plan optional

responses to these opportunities [ibid.].

Research in the strategic management area suggests that company success, measured ultimately in terms of profitability, is somehow influenced by the existence of an environmental scanning activity. For example, Grinyer and Norburn [1975] found that the higher were the volumes of information collected and used in strategic decision making the more effective the performance of a company tended to be. Wolfe [1976], using a simulation model discovered that managerial effectiveness increased as the knowledge of the environment on the part of the decision makers also increased. Similarly, Miller and Friesen [1977], by identifying ten types of firms ("archetypes"), showed that corporate success was related, among other factors, to the appropriate amount of environmental information collected and analysed, relative to the characteristics of the environment.

The nature of the environmental scanning activity may vary widely from company to company. Research has shown that the quantity of environmental information processed by companies and the sophistication of the mechanisms used to collect and analyse that information vary with the nature of the environment. In environments with low levels of uncertainty, particularly in environments that are relatively static, the scanning activity tends to rely on a detailed analysis of the past, as a basis to forecast the future [Johnson and Scholes, 1984, ch.3]. Environmental scanning in this case, tends to be more continuous and systematic than in dynamic situations where it is likely to be more intermittent and inspirational in nature [ibid.]. In fact, when the past can be used as a reasonably reliable prediction of the future managers are willing to invest time and resources in relatively sophisticated scanning activities based on the formal collection and analysis of historical environmental information. In contrast, when conditions are particularly dynamic and volatile managers do not concentrate so much on formally diagnosing what has happened, preferring instead to rely on verbal, more informal information which enable them to sense the future.

Research conducted to determine the object of the environmental scanning activity has found that companies focus primarily on economic

factors, specially those concerning the competitor sector [Aguilar, 1967, ch.3; Wall, 1974; Glueck 1980, ch.3]. The influence of competitive forces on the shaping of a company's strategy has been extensively explored by Porter [1979, 1980, 1985] who has provided a very complete analytical framework as a structured means of examining the competitive environment of an organization. The literature above addresses predominantly the scanning activity in a domestic context. In the case of multinationals, the sheer variety of environmental influences to which companies are subject, and the implications of such a variety in the companies' overall strategy, suggest the need for the collection and analysis of environmental information of a wider ranging nature. In the sub-section that follows, the process of environmental scanning will be discussed in the context of the MNC, and particular attention will be given to the collection and analysis of non-economic information.

3.4.2. The Environmental Assessment Activity in MNCs

Corporations operating at a multinational scale face increased levels of uncertainty, which managers attempt to cope with by implementing mechanisms of flexibility whose purpose is to elicit the companies' adaptability to changing environments. Mascarenhas [1982] describes several ways that MNCs can use to increase their flexibility, one of them being the implementation of **"an intelligence system so as to be able to monitor and respond to new environmental developments"** [p.89].

The existence of an intelligence system in a MNC implies the presence of an organized activity of collection and analysis of information about foreign environments. To perform such an activity properly the organization must have, first, access to relevant environmental data; secondly, it must develop mechanisms for organizing the data and procedures for analysing them; thirdly, the organization must disseminate the findings to the appropriate decision centres and people in the company [Aharoni and Baden, 1977, ch.6]. Before seeking access to environmental data, the corporation must know, however, what data to look for. This will depend upon the type of decisions in

which the environmental information is expected to be used. Nevertheless, if a company wants a reasonably comprehensive characterization of a host country environment it may base its analysis on a systematic model of assessment either developed in-house, or borrowed from the literature. In the latter, several models of environmental characterization have been proposed over the years. One of them - Farmer and Richman [1965] - was extensively discussed, in a different context, in chapter 2 of the present work. The Farmer and Richman model provides a comprehensive classification of environmental influences on an enterprise in any given country, and covers a wide range of variables not only economic, but also educational, sociological-cultural, and political-legal. Other alternative models that can be of assistance in the characterization of host country environments have been proposed, for example, by Negandhi and Estafen [1965], Litvak and Banting [1968], Thomas [1974], and Glueck [1976, ch.3].

The use of a systematic model of environmental assessment presupposes a relatively advanced stage in the scanning activity, which only a few corporations are likely to have introduced. Some form of environmental scanning is, however, expected to be found in any international company. It is difficult to conceive a properly managed company in which decisions with a long-range impact on the organization are taken without giving consideration to the external environment. In fact, academia and practice have long recognized the importance of environmental assessment as a support to decision making. However, traditionally scanning tended to be made on an informal basis and tended to focus on economic aspects of the international environment, giving only scant attention to non-economic factors (in the literature, for example Vernon and Wells [1976] provide a very unbalanced view of the context of international business by discussing almost exclusively the economic environment).

Early empirical studies on the environmental scanning activity in MNCs, reviewed the collection and analysis of host country information in the context of one of its primary uses: the foreign direct investment decision. These studies noted that the decisions to invest in a country were generally based on subjective perceptions on the

part of the decision makers, rather than on well founded information purposely collected [Aharoni, 1966; Root, 1968a, 1968b; National Industrial Conference Board, 1969]. Considerations of political stability and political risk were dominant among those of a non-economic nature. For instance, Root [1968a], who explored the attitudes of executives towards five countries (U.K., France, Brazil, Mexico, and India) in a large sample of U.S. MNCs, found that attitudes regarding the stability or instability of a given country were highly determinant of the attitudes towards the safety and profitability of investments in that country. He also concluded [1968b] that such attitudes relative to political stability were based on general images of countries **"carried by executives in their heads"** [p.22], and not on a systematic evaluation of the actual conditions encountered in the countries.

Other studies followed these pioneering efforts with not very different results. Keegan [1974] confirmed how little managers relied upon systematic scanning methods, and noted that organized gathering of environmental information was hardly significant in the companies he analysed. Behrman, Boddewyn and Kapoor [1975] found that generally managers did not anticipate environmental changes, rather reacting to them a posteriori. La Palombara and Blank [1977] reported the important finding that an environmental analysis function, although insipid, was already in existence in a number of MNCs. Included in their study were not only U.S.-based multinationals but also corporations based in the U.K., Continental Europe, and Canada. The authors found a relatively well organized system of information collection and analysis for economic data on host countries, and, in contrast, a **"remarkably loose and casual"** mechanism for non-economic information [ch.5]. Environmental analysis, which was found to be a part of the corporate planning process, included non-economic information occasionally collected by either affiliates or high-level headquarters management. The relatively superficial quality of such an information system, could perhaps be attributed to a certain fear on the part of companies that a deep involvement in the gathering of local non-economic information might be misunderstood by host countries. As the authors explain:

"Multinational firms, particularly the U.S. firms, also have deep fear and antipathy about "political involvement". Given past political interventions of some MNCs in the internal affairs of host countries, firms want to steer as wide as possible from any suspicion of similar behavior. There is a tendency to confuse sophisticated analysis of a host country's society, its political system and economic development aspirations, with covert intelligence activity."
[ibid., pp.xiii, xiv]

Recently, two studies provided more up-to-date information on company practices as regards the collection and analysis of foreign environmental information. They both reached the conclusion that the environmental assessment activity in many MNCs, having achieved a considerable level of refinement and sophistication, had been institutionalized in a formal function. The first of these studies corresponds to a major project led by Stephen Kobrin [Kobrin et al., 1980], which involved the mailing of questionnaires to large U.S.-based MNCs (193 usable replies were received) and the conducting of extensive interviews (113 managers in 37 firms were interviewed). The study focused on the methods used by companies to process host country information of a non-economic nature (mainly social and political), and found that more than half of the respondents (55 percent) had already centralized and institutionalized an environmental assessment function. In these companies there were one or more organizational units with formal responsibility for collecting and analysing host country information. Such units varied widely in complexity from company to company, and ranged from one junior staff analyst with part-time responsibilities for country studies to a group with five analysts charged with developing and implementing a formal assessment methodology on a continuous basis [ibid., p.35]. The locus in the organization of the groups formally charged with the assessment of environmental information were mainly the finance/treasurer department, the planning and the legal departments, and the international division. In companies that had not institutionalized the function, top management tended to bear responsibility for environmental assessment. Tests of association indicated that the MNCs which had institutionalized the assessment function tended to be larger and more international than those which had not. Also, firms in industries that were more vulnerable to environmental impacts were found to be more likely to possess a formal function. In effect,

nearly three quarters of the natural resource companies had assessment groups, as compared to the average of slightly more than half for all the cases studied.

The process of collecting and analysing environmental information was described by Kobrin et al. as "reactive rather than active" [ibid., p.37]. Only about one third of the corporations conducted environmental assessment on a routine basis. In the majority of the cases the process was made "on demand". As the authors point out, the essentially reactive nature of the assessment process explains that environmental analyses tended to be utilized in conjunction with certain activities which require action. Most analyses were motivated by an internal event such as an investment proposal, or the strategic planning cycle, or less frequently by an external event such as a major change in a given country of interest to the firm. Although the authors did not particularly explore the utilization of environmental information in the evaluation of foreign subsidiary operating performance, there is reason to believe that such an use was not widespread, since only a minority of firms (a quarter of the respondents) reported to employ environmental information for day-to-day operations.

As regards the sources of information used by companies, Kobrin et al. reached findings that are consistent with those of previous studies. Apparently, there was a distinct preference for executives to obtain political and social information through **"interpersonnel communication in the context of well established networks"** [p.38]. The information sources considered of most importance by respondents were internal to the companies, especially subsidiary and regional managers, and headquarters personnel. A number of external sources of information were also used (banks, consultants, business periodicals, etc.) but they were all generally considered of less importance. A noteworthy finding of the study was that the environmental assessment process was often conducted in a manner that did not lend itself to an independent and objective analysis, because of a heavy reliance on host country management. As Kobrin et al. explain, subsidiary and regional executives not only prepared the assessment but also usually decided which aspects of the local environment merited coverage [p.41]. It is

in this sense that the authors define the environmental assessment as a "bottom up" procedure. The natural implication of this is that subsidiary managers, either locals or expatriates, are members of the host country elites, and because of this they may not be in the best position for an objective and unbiased analysis. Similarly, host country managers are rewarded for the results their subsidiaries are able to show, thereby they have a vested interest in the environmental information they report and in the decisions headquarters senior executives may take on the grounds of the information that is reported.

It appears, as a general conclusion to the Kobrin et al. study, that the environmental assessment function required a more objective and systematic approach in its modus operandi. It also required the imposition of some strategic direction from top management which enabled comparability between countries or regions. Another important conclusion of the study is that despite the rapid emergence of the environmental assessment activity as a formal function in MNCs, there was a lack of integration of that activity into the decision making process.

The second study to provide up-to-date information on company practices relative to the collection and analysis of foreign environmental information is Kennedy [1984]. Kennedy's research is a follow-up of the Kobrin et al. [1980] study. It had as a stated objective to determine whether substantial changes in the environmental assessment function had occurred in U.S. MNCs since the Iranian revolution(6). The overthrow of the Shah in Iran had enormous consequences for multinational business, and raised a sharp interest on the part of companies on environmental assessment issues in general and political risk in particular. Such an interest was also reflected in the academic literature, giving rise to what some call "the post-Shah surge in political risk studies" [e.g. Glueck and Jauch, 1984, ch.3]. Examples of this literature are Linnemann and Klein [1979], Newgren and Carroll [1979], Ritvo, Salipante and Notz [1979], and Fahey, King and Narayanan [1981].

The Kennedy [1984] study was based on structured interviews (61 in total, 10 personal and 51 on the telephone) conducted in very large U.S.-based MNCs. Kennedy reports that nearly three quarters (74 percent) of the companies analysed had formally institutionalized the environmental assessment function, which represents a substantial increase from the 55 percent figure obtained by Kobrin et al. [1980] four or five years earlier. Such an increase would be easily justified by an upward trend in the institutionalization of the environmental function, already detected in empirical studies spanning more than a decade. Also, the "trauma" created in many companies by the discontinuities in Iran could provide a logical explanation for the increase in importance attached to non-economic host country information. However, as Kennedy points out the results of the two studies may not be compatible for possible sample bias and definition problems in his own study [p.100]. If no safe conclusion can, therefore, be drawn as to the increase in the number of firms introducing a formal environmental function, nevertheless the study appears to demonstrate that a greater qualitative emphasis had been placed on environmental assessment by MNCs in the last few years. In effect, the collection and analysis of host country information was found to be less dispersed within the organization, in those companies which had introduced the function since 1978. (In the overwhelming majority of the cases the function is located in the planning department). Similarly, an increase in the number of full-time analysts as opposed to professionals with part-time assessment responsibilities, together with an increase in the reliance placed on information supplied by outside sources, appear to suggest a significant qualitative change in the U.S. corporate approach to environmental assessment. In Kennedy's interpretation, **"this strongly implies a more serious, co-ordinated, and less haphazard approach to external environmental analysis"** [ibid., p.101].

Another important conclusion of the Kennedy study was that the institutionalization of the environmental assessment function was somehow related to the characteristics of the planning process, namely to the existence of business portfolio or strategic business unit (SBU) analysis. In all cases, environmental information was considered of great importance to companies, even to those which had

not yet institutionalized the assessment function. This fact suggests that a particularly positive and receptive attitude towards the external environment assessment activity was present in MNCs. Accordingly, further progression and sophistication in the organization of the environmental collection and analysis function may be expected in the future.

Despite the relatively large pool of knowledge accumulated over the years as regards the practices of U.S. multinationals in this area, very little is known about U.K.-based MNCs. The study by LaPalombara and Blank [1977] previously mentioned, included British multinationals together with companies from other countries. Although the distinctions in the practices of companies from different origin are not very clearly reported in that study, there is reason to believe that at the time a formal function of environmental assessment was also beginning to emerge in MNCs from Britain.

3.4.3. Summary

The environmental scanning activity lies as the foundation of the strategic management process. The setting of corporate objectives and the determination of the most appropriate courses of action to achieve such objectives encompass a careful consideration of the nature of the environment in which companies' operations evolve. Environmental scanning involves the activity of collecting and analysing information external to the organization in order to detect present and future threats and opportunities that should prompt managerial action.

The characteristics of the environmental scanning activity, in terms of volume and nature of the information processed, and also in terms of sophistication of the techniques used to collect and analyse information are suggested in the literature to be influenced by the degree of dynamism and complexity encountered by companies in the environment. In the case of MNCs, normally the external environment presents high levels of uncertainty resulting most of the times from the highly complex nature of the overall environment these companies

have to face. Coping with such complex external conditions, appears, therefore, to require the use of particularly well developed mechanisms of collection and analysis of host country information.

Traditionally, environmental scanning tended to be made on an informal basis. It also used to concentrate on economic data, overlooking most information of a non-economic nature. Empirical studies conducted during the 1960s and the early seventies all agreed in that a systematic and well organized gathering of environmental information in MNCs was hardly existent. Towards the end of the 1970s, studies started reporting that an environmental analysis function was emerging in multinationals. Such a function implied an institutionalized activity of collecting and analysing environmental information which in the beginning appeared to concentrate on economic data, spreading afterwards into non-economic information. Larger and more international corporations, together with firms in industries that were more vulnerable to host country environmental impacts were found to be those which tended to have introduced the environmental assessment function. Generally, the nature of the function was more reactive than active, meaning that only a minority of companies were conducting environmental assessment on a routine basis. In fact, most analyses were triggered by an occasional event such as a new investment, or a major change in a country of interest to the company, rather than making part of a continuous and permanent surveillance of external environmental conditions. Accordingly, and despite the lack of evidence in this respect, it appears that environmental information was not being widely used in the evaluation and control of foreign subsidiary operating performance. Overall, there seems to be a growing number of corporations implementing the environmental assessment function. Also, as a recent study suggests, there are signs that the quality of the function is increasing, and that there is a growing awareness on the part of senior executives of the importance of external environmental information.

Nearly all the empirical evidence available as regards the environmental scanning activity in MNCs is referred to U.S.-based companies. Accordingly, very little is known about how foreign environmental information is processed in U.K. MNCs. The present

study intends to bring a contribution to the knowledge in the area by reviewing the practices of British multinationals.

3.5. Summary and Conclusions

The present chapter brought the discussion of the relationships between an enterprise and its external environment initiated in the previous chapter to a more concrete level. Here, the analysis centred on a particular form of organization - the multinational corporation - which is focal to the study. In essence, the purpose of the chapter was to capture the nature of the dynamic relationship between a MNC and its environment by analysing the characteristics of the scenario which frames the international operations of a company. Also, the chapter intended to reveal the response of a MNC to the threats and opportunities posed by such a scenario, in the form of corporate strategic management and environmental scanning activities.

After a definition of MNC has been proposed, the chapter turned to a discussion of the nature of the environmental frameworks in international business. A very distinctive feature of a MNC as compared to a domestic company is the degree of variability in the external environment to which the MNC is subject. A systems view is useful to understand the ways in which a MNC differs from a purely domestic firm. The chapter presented a model of a MNC system which defines the total environment of a multinational as a composition of operating units in different domestic environments. Each unit (or subsidiary) acts as any local company by engaging in input-output transactions with other entities in the domestic environment. However, because a MNC normally involves a certain degree of control of subsidiaries by headquarters, and a common strategy and resource allocation criteria, there are inevitably flows among subsidiaries that cross national frontiers. Such flows are conditioned by controls and regulations imposed by countries, which reside in the international sphere of each domestic environment, and also by

international institutions that transcend nations and regulate economic activity. All these elements are considered in the model presented in the chapter, together with the unique set of economic, political, legal, social, and cultural influences on subsidiary operations associated with each host country. These environmental influences are likely to change across geographic regions. The degree of variation due to location is related not only to the number of countries where the MNC operates, but also to the very nature of such countries. In spite of this, the chapter presented a list of environmental factors that are most likely to change from one country to another, and which provides an illustration of how different country environments can be.

Adding to the complexity of the environment, MNCs have also to face particular conditions that result from the fact of them being simply multinationals. Over the years, the overall atmosphere towards multinational business has changed considerably both in home and host countries. Three periods since the end of the second world war were identified in the chapter. The first (1945 - late sixties) was highly favourable to the growth of MNCs and presented great opportunities in the way of relatively stable environments. The second period (late 1960s - late 1970s), presenting a sharp contrast, was marked by turbulence and discontinuities helped by hostile attitudes towards MNCs. A third period (the 1980s), characterized by slightly steadier environmental conditions and more positive attitudes towards multinationals, appears to begin to emerge.

In order that an organization be able to reach its objectives in an efficient and productive manner it must adapt to the constantly changing conditions in the environment. Such a process of adaptation requires that decisions are made strategically, that is in a way that the organization's activities match the characteristics of the environment and explore to the full the resource capability of the organization. The external environment with its permanent changes and its varied influence on an enterprise is a major source of uncertainty for management. An important portion of managerial activity is typically spent dealing with uncertainty. Part of the role of strategy is to assist in this respect. In effect, by analysing a

given situation in order to make a strategic decision, managers attempt to reduce the many influences of the environment to a pattern which they can understand and act upon. The level of uncertainty in the environment results from its degree of dynamism and complexity. In MNCs, environments tend to be particularly uncertain due to varying degrees of dynamism and a generally high level of complexity, both resulting from the existence of country subenvironments with different characteristics. Consequently, strategic management in MNCs presents very special problems that must be understood if a perfect match with the environment, within an efficient use of internal resources, is to be achieved by a company.

Having provided a discussion of the nature of strategic management in general, the chapter concentrated on the understanding of multinational strategies. Two vectors frame the development of a company in the international scene and dictate its approach to the overall organization of activities worldwide. One of these vectors is mainly economic and represents the pressures for a company to be competitive and efficient on a transnational basis. The other vector is eminently political and reflects the pressures for a company to respond to demands and incentives of individual host environments. Economic imperatives may influence a company either into fragmentation or unification in its pattern of international operations. Fragmentation is motivated by diversity in local market conditions, such as different customer needs and tastes, and by certain characteristics of industries, like short lead times, emphasis on distribution, high transportation costs, and unavailability of scale economies. Unification, in contrast, is induced by the existence of substantial economies of scale in manufacturing, material and component sourcing, R&D, and marketing, and also by universal product needs, and multinational customers and competitors. Political imperatives, on the other hand, normally push a company into fragmentation. A result of the exercise of the prerogatives of sovereign governments, political imperatives consist of a large number of specific requests and general demands made on MNCs by host nations.

The choice of strategy by a MNC should give consideration to the particular economic and political imperatives influencing the

international activities of the company. Frequently, pressures to unify and to fragment operations are co-existent inside a MNC. It is, therefore, the role of management to decide to which pressures should the corporation respond first, in order that the highest economic benefits may be captured with the minimum political disruption and interference. Three distinct strategies were defined and discussed in the chapter, namely the segmented nation-for-nation strategy, the global integration strategy, and the mixed segmented-integrated strategy. In industries where the pressures for integration and segmentation are simultaneously high, the level of control exercised by host governments over the industry on one hand, and the bargaining power of the MNC on the other, appear to have a decisive influence on a company's choice of strategic posture. As it was extensively discussed in the chapter, each of the three main strategy stereotypes results in different organizational structures, practices, and levels of control by headquarters over subsidiaries. Therefore, the choice of strategy by a MNC has far reaching implications for the present study.

At the foundation of the strategic management process lies an activity which is instrumental in the creation of an adequate interaction of an enterprise with its external environment. Such an activity consists of the scanning of the conditions which frame companies' operations with the objective of recognizing threats and opportunities that should prompt managerial reaction. The environmental scanning activity involves searching and diagnosing practices, whose characteristics and degree of sophistication are believed to be dependent on the level of dynamism and complexity found in the environment itself. Accordingly, it appears that in MNCs, where such levels of dynamism and complexity are at its highest, the scanning activity would require particularly elaborate techniques to process environmental information. Extensive empirical evidence focusing on U.S. multinationals is available, and was reviewed in the chapter. By judging the results of research over a number of years, it appears that there is a growing number of MNCs institutionalizing in headquarters an environmental assessment function. Equally, the quality of the scanning activity appears to be steadily increasing. From the available evidence it is not clear how the environmental

information retrieved is used in the decision making process, particularly in the evaluation process of foreign subsidiary operating performance. The present study proposes to shed some light into such an aspect and simultaneously to contribute to the scarce knowledge of the environmental scanning activities in British multinationals.

Footnotes:

- (1) For a compilation of definitions of MNC see McGreevy [1978], where more than a dozen of different criteria used in the literature to describe a MNC are presented.
- (2) This includes the International Bank for Reconstruction and Development together with its two associated agencies, namely the International Finance Corporation and the International Development Association.
- (3) For a comprehensive discussion of the control exercised by headquarters of MNCs over the strategic resources made available to subsidiaries, see the two-part series article by Prahalad and Doz [1981], and Doz and Prahalad [1981].
- (4) Multinational strategies, defined in accordance to similar criteria as the ones used here, have been termed differently by distinct authors. For example, Doz [1980] calls the three strategies presented here, respectively national responsiveness strategy, worldwide integration strategy, and administrative coordination strategy. Hout, Porter and Rudden [1982] distinguish between multidomestic and global strategies. Davidson [1982] talks about local and global management strategies. Fayerweather [1982] makes a separation between a strategy of fragmentation and a strategy of unification.
- (5) The application of models of investment appraisal in practice is most likely to leave absent from the calculation of future cash flows important strategic, market, and competitor considerations that are not directly reflected in the investment per se, but which affect the company as a whole. If investment appraisal techniques are used in such a deficient way it is not surprising that Hout, Porter and Rudden [1982] suggest the occasional selection of a project that shows an insufficient internal rate of return or net present value. An example of a situation in which the decision to invest is motivated by consequences that transcend the investment itself is a project whose main purpose is to drain the cash flow of a major competitor in the market where it is traditionally generated (the case described by Hout, Porter and Rudden of Caterpillar's investment in Japan to block the position of its main world competitor, Komatsu, is an illustration to this point). Another example is the case of an oil company deciding to invest in a new oil field yielding large potential, just because major competitors are exploring it. As Robbins and Stobaugh [1973b] point out, no company would risk being left out of such a new field even if the (deficient) application of investment appraisal techniques produces unattractive results. As they point out [p.81], the risk of a rival finding a large, low cost oil field, and thereby acquiring a long term strategic advantage is too high for the company to take.
- (6) The Kobrin et al. [1980] study was, in effect, conducted before the Iranian revolution, since the questionnaires on which part of the research is based were completed by respondents in 1978.

CHAPTER 4 - INTERNAL CONTROL AND PERFORMANCE EVALUATION IN MULTINATIONAL CORPORATIONS

4.1. Introduction

Before initiating a discussion on the internal control and performance evaluation processes in MNCs, a brief examination of the nature of the control activity in an organization is required.

In a restricted sense, control may be defined as an essential management function whose purpose is to direct the employment of organizational resources in an efficient and effective manner. According to this definition, control follows the function of acquiring and organizing the human, technical and capital resources necessary to implement plans and goals previously devised in the organization [Steiner, 1969, ch.2]. This view presents a classic and elementary approach to the management of organizations which sees managerial activity composed of three major functions: planning, organizing, and controlling [e.g. Miller, 1982, ch.2; Horngren, 1982, ch.1]. Despite the need for distinguishing in theory between planning and control most authors agree in that the two functions are inextricably interwoven not only in practice but also conceptually. Steiner [ibid, p.41] explains that **"although the basic distinction between planning and control is sharp the two are inseparable; they are inseparable because planning is necessary before controlling can be meaningful, and each must be done in light of the other"**. Therefore, although the focus of this chapter will be on ex post monitoring of sub-organizational activities, i.e. on control, planning will always be implicit.

In a much broader sense, and at a purely conceptual level, control may be seen as the process by which an organizational system adapts itself to the environment in which it operates. In chapter 2, business organizations were defined as open systems in constant interaction with their surrounding environment. The distinctive characteristics of open systems were said to be a tendency to evolve towards greater complexity, the ability to reach a "steady-state", and the capability of behaving "equafinally". Such characteristics mean that business organizations are capable of constantly adapting their behaviour to the ever-changing characteristics of the environment, and so preserve their integrity and identity. The capability of achieving adaptation through a certain level of stability which maintains the organization in existence is provided by internal control mechanisms. Control is therefore vital to the organization's survival. This idea is expressed by Amey [1979, p.250] in the following terms: **"Business enterprises are open to a wide range of environmental and internal disturbances, and without the conscious exercise of control would be highly unstable systems"**.

Internal control in an organization is concerned with both strategic issues (the search for an adequate match between the organization and the environment), and operational issues (the search for an effective allocation of resources guided by the achievement of goals) - see, for example, Emmanuel and Otley [1985, ch.1] for a discussion along these lines. Strategic issues were amply discussed in chapter 3 of the present study in the context of the MNC, which is the type of organization where the problems of interaction with the environment are likely to be experienced more acutely. In the present chapter, operational issues will be emphasized, and internal control will be discussed in the framework of the process guiding the monitoring of performance of organizational subunits (i.e. divisions, subsidiaries).

The chapter opens with a discussion of the essence of control in organizations and starts by equating control with the ultimate organizational purposes of achieving certain minimum necessary requirements of internal stability and adaptability to the external environment. Next, the chapter places control in the context of the

continuous internal monitoring process of organizational unit performance and draws attention to the fact that the evaluation of unit performance ought to distinguish, at least at a theoretical level, between output (i.e. the performance of the unit as such), and behaviour (i.e. the performance of the management responsible for the unit). Established such a distinction, different types of control modes are presented. These modes apply equally to the monitoring of organizational output and management behaviour of foreign subsidiaries in MNCs and are basically characterized by differing levels of formalization of control mechanisms, such as targets, measures, rules of conduct, and interpersonal relationships. The factors influencing the choice of particular control mechanisms and of the general characteristics of the MNC's internal control process are, then, reviewed on the basis of the evidence available in the literature. Such a review will, hopefully, provide a sound basis for the ascertainment of major explanatory variables relevant to the present study.

Having introduced the formal and the informal dimensions of performance evaluation, the chapter explores each in detail. The formal performance evaluation process in MNCs is based on information provided by communication channels formally institutionalized between headquarters and subsidiaries. These channels constitute a firm's management information system whose meaning is defined in the chapter. The design of the information system as far as the flow of information between headquarters and foreign subsidiaries is concerned, is then discussed at the light of the empirical evidence available. Next, the use of the information provided by the internal reporting system in MNCs is analysed, and major problems and difficulties arising in subsidiary performance evaluation from the use of such information are highlighted.

As to the use of informal information in performance evaluation, the chapter attempts to explain the reasons why information that is not collected through formal channels of communication is utilized in the monitoring of subsidiary performance. Intrinsic weaknesses of the management information system, attributed to be a major cause for the

use of informal information, are reviewed and extended to the case of companies subjected to highly diverse and dynamic environments. The chapter ends with a discussion of the role of informal information in the headquarters-subsidiary relationship. The circumstances in which informal information is called upon to use are subject to scrutiny. Also, the ways in which informal information is integrated in the formal evaluation process are carefully analysed.

4.2. The Essence of Control in Organizations

4.2.1. The Ultimate Purpose of Organizational Control

As it has often been suggested previously, organizational survival demands a constant fit of the organization to its environment. Moreover, organizational success can be viewed as a result of how well organizations react to, and also anticipate, threats and opportunities in the environment.

Survival and success of an organization can only be achieved through the use of control mechanisms⁽¹⁾ which ensure that organizations attain a desired degree of flexibility subject to the necessary levels of stability. Organizations, as any other complex open systems, ought in the first place to achieve internally a stable dynamic equilibrium (a steady-state, according to Von Bertalanffy [1950, 1972]). Stability, once obtained, can be maintained by ensuring that any deviations from the desired (equilibrium) values are kept within certain prescribed boundaries. However, as Amey [1979] reminds, the control exercised to keep an organization stable may restrict its ability to adapt and change in relation to the environment. In the pursuit of stability, resources are deployed in the maintenance of a desired state of equilibrium. Some of these resources could perhaps be more usefully employed in testing the environment, and in

proactively making anticipatory moves. Therefore, besides being stable, organizations also ought to be flexible and adaptive, and this has to be elicited by the control mechanisms. In sum, the activities of sociotechnical systems (remind Boulding [1956]) should be conditioned by the simultaneous attainment of internal stability and flexibility. In this sense, Buckley [1967] argues that the most far reaching objective of an organization is a joint optimization of stability and flexibility. A similar position is defended by Amey [1979] who, nevertheless, gives priority to flexibility over stability. In his proposition, business enterprises should be guided by an objective of maximizing adaptability (flexibility being a prerequisite to successful adaptation) subject to a minimum necessary degree of stability. As Amey [ibid, p.255] explains:

"The organization must be thoroughly committed to impermanence. [...] To remain viable and adaptive, business enterprises need to maintain great flexibility in their structure and organization. At the same time a certain degree of stability is necessary in at least some of the relationships between system components, in all of their dimensions - technical, managerial, and social (interpersonal relationships) as well as financial - otherwise the organization might fly apart and cease to exist." [emphasis added]

Having equated control in organizations with the ultimate purposes of maintaining flexibility and stability, the discussion will now take a more pragmatic view, and will deal with control as a process by which desired performance of an organizational unit is monitored.

4.2.2. Monitoring the Performance of an Organization - Object and Types of Control

In a general sense, organizational performance results from a relation between controlled variables and uncontrolled variables [Ackoff, 1974, p.233]. The latter can be presented to an organization as both constraints which the organization must face (for a meaningful period of time they are fixed conditions to which the organization has to

adapt), and contingencies which the organization must meet [Thompson, 1967, ch.2].

Performance should, therefore, be monitored in a way which recognizes that organizational success in the attainment of goals is only partially dependent on managerial competence. For this reason, two different phenomena are required to be monitored when assessing the performance of an organization, namely output and behaviour [Ouchi, 1977]. Each will give indications of different dimensions of performance. In effect, while output is concerned with the performance of the organization as such, behaviour deals rather with the performance of the management responsible for the organization. Monitoring output focuses on "ends", and relies heavily on readily available output measures. In contrast, monitoring behaviour emphasizes the "means" to the ends, and looks at actions and decisions instead of shortcut measures. A similar distinction has also been made by Levinson [1976], who drew attention to the fact that the monitoring of performance should accommodate the "what" (i.e. the outcome, or output) as well as the "how" (i.e. the behaviour) in performance.

Monitoring the performance of an organization, either its output or the behaviour of its managers, involves the use of practices and instruments that may widely vary in character. Child [1972, 1973] introduced a distinction between two major types of control - personal and bureaucratic - to which Edstrom and Galbraith [1977] added a third type - control by socialization. As Baliga and Jaeger [1984] note, in the context of the MNC the personal type of control consists of placing trustworthy executives from headquarters in key positions in subsidiaries to supervise their functioning, and to report information and results to the centre. On the other hand, the bureaucratic mode constitutes a more indirect and impersonal kind of control which relies on an extensive set of rules, regulations and procedures. These create a fair degree of formalization in the control process. The third type of control - control by socialization - is close to the personal type and is characterized by a large proportion of people on whom the company has absolute trust, placed in upper and middle

management positions, exchanging information with headquarters on a permanent basis. An important characteristic of this type of control is the de-emphasis placed on formalization. Because of the affinity between the personal type of control and control by socialization, Baliga and Jaeger [ibid.] proposed a merger of the two under the name of cultural control. Consequently, one may distinguish between two dominant forms of control that managers in MNCs can employ to monitor the performance of their subsidiaries: bureaucratic control, and cultural control.

Both types of control - bureaucratic and cultural - are likely to coexist within companies, though one of them will always prevail. In their pure, ideal form bureaucratic and cultural controls are viewed as opposite approaches to organizational control. The bureaucratic model is the prototype of formalized control. It is based on the utilization of an explicit set of codified measures and rules which define desired performance in terms of output and/or behaviour [Child, 1973]. The instruments used in the monitoring of output are widespread and include formal performance reports submitted by subunits to the parent through the internal reporting system, performance measures reflecting ex post output, and targets representing desired performance determined ex ante. On the other hand, the monitoring of behaviour is helped by instruments such as company manuals, formal internal rules of conduct, and management by objectives (MBO) techniques (for a discussion of the latter, see Humble [1970], and Odiorne [1979]). In general, monitoring performance in a bureaucratic mode involves the comparison of organization's output and individuals' behaviour to standards predetermined in measures and rules, and applying the appropriate rewards or penalties that follow. These rewards and penalties may be of an organizational nature when they involve decisions dealing with the allocation of company resources among subunits (subsidiaries), and of a personal nature when individuals' performance determines supplemental compensation, as well as other incentives such as esteem, job satisfaction, promotion, and status symbols.

The cultural model of control, on its turn, does not rely on codified formal procedures, preferring instead informal and implicit control mechanisms. The natural habitat of such a control mode are companies with a strong corporate culture (for a discussion of organizational culture see Deal and Kennedy [1982], and Schwartz and Davis [1981], among others). Japanese companies are said to favour the cultural model of control [Hatvany and Pucik, 1981; Wilkinson, 1983], and authors such as Ouchi [1981] have adapted the approaches used by those companies to Western organizations. Monitoring of performance in a typical cultural control model occurs through interpersonal interaction, and although explicit formal control mechanisms are present, monitoring is drawn essentially from a general company-wide culture [Baliga and Jaeger, 1984]. Organization's output and individuals' behaviour are monitored during the course of interpersonal interactions. Feedback, which can be of a subtle nature, is given to organizational participants on a personal basis.

Exhibit 4.I summarizes the differences in the control mechanisms associated with the bureaucratic and the cultural types of control. Elements of the cultural model of control are likely to be found in any company, to a larger or lesser extent. Even corporations which heavily rely on formal bureaucratic control will use informal control mechanisms as a complement to the institutionalized explicit control procedures. Informal control of performance will be further discussed later in the chapter.

4.2.3. Factors Influencing the Characteristics of the Control Process

The degree of bureaucratization and informality found in a company's control system are thought to be influenced by the very characteristics of the company which operates the system. As Baliga and Jaeger [1984] remind, the age, size and industry of a company have been found to impact significantly on the emphasis placed by the company on bureaucratic control. In particular, it appears that the

Exhibit 4.1 - Control Mechanisms Used by the Bureaucratic and the Cultural Types of Control for Output and Behaviour

OBJECT OF CONTROL	T Y P E O F C O N T R O L	
	BUREAUCRATIC	CULTURAL
OUTPUT . Focuses on ends . Emphasizes the "what" in performance	Codified formal control mechanisms * Reports submitted through the formal information system * Performance measures * Performance standards and targets	Informal and implicit control mechanisms * Interpersonal interaction * Shared norms of performance
BEHAVIOUR . Focuses on means . Emphasizes the "how" in performance	* Corporate manuals * Formal internal rules of conduct * MBO techniques	* Interpersonal interaction * Shared norms of behaviour * Corporate culture

older the firm, the larger its size, and the older the industry in which it functions, the more bureaucratic and formalized the company tends to be [e.g. Khandwalla, 1977; Reimann, 1973]. On the other hand, studies in organization which focused on the interaction between the enterprise and its environment have suggested that firms choose a certain level of formalization and adopt determined internal processes as a response to environmental characteristics. This was discussed in some detail in chapter 2 of the present study.

Control in multinationals is affected by the factors just mentioned and also by a number of variables that are characteristic to MNCs. The strategy adopted by the organization for its international network of operations is just one of these variables. In chapter 3, a typology of multinational strategies was defined, which essentially opposed global integration strategies to segmented nation-for-nation strategies. Such strategies can be interpreted at the light of Thompson's [1967] classic model of internal interdependence, in order to put in context certain assertions made by Baliga and Jaeger [1984]. According to these authors, sequential and reciprocal interdependence, which are believed here best to reflect integration strategies, typically generate a greater need for monitoring and coordination leading to the bureaucratic mode of control. On the other hand, pooled interdependence, which is akin to segmented strategies, by not requiring such high levels of control coordination, would facilitate the use of more informal approaches to control.

Another factor that is thought to influence the nature of the control process is organizational structure. Management's choice of structure for a company's international operations (i.e. organization by international division, by product, geography, matrix, etc.) would affect its control and monitoring system [e.g. Daniels, Ogram, and Radebaugh, 1982, ch.18]. Also, at a more fundamental level structural issues such as decentralization and divisionalization were suggested to play an important role in explaining the degree of formality encountered in a control system [see, for example, Emmanuel and Otley, 1985, ch.2]. Similarly, organization theorists such as Mintzberg [1979] have proposed a classification of control mechanisms linked to

organizational forms characterized by different structural patterns.

Finally, an important factor in determining the characteristics of the control process in MNCs could also be the management philosophy prevalent in companies headquarters. In a well known model of multinational organizational policy first presented by Perlmutter [1969] and later developed by Rutenberg [1982], the managerial attitudes in MNCs are viewed to follow a typical evolution that includes three stages: ethnocentricity (or home country orientation), polycentricity (or host country orientation), and geocentricity (or world orientation). As Perlmutter explains, these are essentially states of mind among international executives which have a strong implication in the functioning of MNCs. As far as control mechanisms are concerned, an ethnocentric multinational would be characterized by tight controls imposed by headquarters, a high flow of orders, commands, and advice from headquarters to subsidiaries, and the application of home measures and standards to all the components of the MNC. A polycentric company, in contrast, would exercise a loose control on subsidiaries, the level of communication between headquarters and subsidiaries would be low, and the performance measures and standards would be determined on an individual subsidiary-related basis. On the other hand, a geocentric MNC would aim for a collaborative approach between headquarters and subsidiaries in its internal decision making, would have an intense flow of information going both upwards and downwards the headquarters-subsidiary communication channels, and would employ measures and standards that are simultaneously global and local.

In conclusion, the discussion here has suggested that management's choice of control systems is influenced by a number of organizational characteristics. Consideration of such characteristics should not be overlooked in a study that proposes not only to offer empirical evidence on the practice employed by companies to monitor foreign operations, but also to explain why certain practices are in use preferably to others. Later in chapter 7, the independent variables of the study will be made explicit.

4.3. The Formal Performance Evaluation Process of Foreign Subsidiaries

4.3.1. The Flow of Information Reported Internally by Subsidiaries to Headquarters

The exercise of formal control in an organization is essentially based on information flowing through institutionalized internal reporting channels. The internal information system in a company is made up of such communication channels and constitutes a primary support, of vital importance, to managerial decision making. Moreover, the information system generates data relevant to the monitoring of the organization and of its elements, thus facilitating the internal control process. In this sense, the information system can be viewed as the "connective tissue" [Shapiro, 1982, p.553] that links all the parts of an organization helping it to preserve its integrity and identity. The close interaction between the control process and the information system is explained by Arpan and Radebaugh [1981, p.292] as follows:

"There is [...] a necessary link between the information system and the control system. A control system must insure that there is goal congruence among all the elements of the organization and that operations are in harmony and consistent with goals. It also must be able to assess the results of operations, in terms of plans as well as of changes in the environment. Yet a control system is no better or worse than the information and decision making systems on which it relies. Hence the symbiotic relationship."

In the typical business organization the management information system (MIS) represents the totality of the formal communication channels. The information that circulates in such channels is used for several purposes in the company (e.g. finance, marketing, production, personnel), and is an integral part of the communication, measurement, evaluation, and decision making activities. At the centre of the MIS

lies the financial information system (FIS) in whose core is accounting information [Miller, 1979, ch.11]. Generally, the FIS dominates the total information system in an enterprise [e.g. Leksell, 1981; Machin, 1983], to the point that in most firms non-financial information is not reported via particular channels, but included instead in the FIS. The reasons for this are varied and range from the fact that historically accounting has represented business information with almost exclusivity becoming known as "the language of business" [Miller, 1982, ch.2], to the fact that the main overall control system seems invariably to be the budget [Machin, 1983]. Due to this dominating characteristic of the FIS within the general MIS, in the present study the term financial information system will be used interchangeably with internal information (or reporting) system.

For purposes of the study, and paraphrasing a definition presented by Leksell [1981], the financial information system is defined as the set of formal and standardized reports which in a MNC are submitted by foreign subsidiaries to headquarters. These reports are primarily (but not exclusively) generated from and based on the accounting system, and may contain not only quantitative but also qualitative information. As integral parts of an institutionalized information system, reports are usually standardized and formalized in terms of content, structure, and reporting frequency.

The next sub-section will attempt to provide an insight into the surprisingly scarce empirical evidence available as regards the design of the internal reporting system in MNCs.

4.3.2. The Design of the International Reporting System

The variety and sheer volume of information reported by subsidiaries to headquarters is illustrated in Watt, Hammer, and Burge [1977, ch.17], when they describe the different reports that are typically forwarded by the subsidiaries of a given U.S. MNC. Such reports cover a wide range of issues from accounts receivable ageing and cash

forecasts for month to non-accounting information such as data dealing with industrial relations, legal issues, and data processing. All these amount to more than 100 reports of different nature. In another U.S. multinational, Watt, Hammer and Burge found that each subsidiary was normally requested to send to the headquarters more than 500 reports during the period of one year. The reporting frequency of the items varied from once every month for certain kinds of reports to once a year for other types.

More recently, Laurent Leksell [1981] produced evidence on the design of multinational internal reporting systems, based on a systematic study conducted in six Swedish MNCs. As regards the content and reporting frequency of the items included in the companies' information systems, Leksell [ibid, pp.212-215] found that financial items such as the balance sheet, income statement, specification of cash and credit, and inventories were forwarded by subsidiaries either monthly or every quarter in all the companies studied. Non-financial reports such as production output, and market share in host country in some companies were either requested on a less frequent basis or not requested at all. A very noteworthy finding is that in four of the six corporations analysed the reporting system included formal reports on the economic and political conditions encountered in the host countries submitted on a very frequent basis (either monthly or quarterly). In the other two corporations such environmental reports were also part of the information system, however on a non-systematic occasional basis only. Leksell points out that the companies in which local conditions in the host countries were regularly reported presented a higher degree of host country dependence (defined as the level of exposure of a MNC's operations to host government influence), and a high intra-organizational interdependence (close to Thompson's [1967] definition of reciprocal internal interdependence).

As far as the standardization of the reporting system is concerned, the degree of uniformity of the international reporting system in relation to format and content was found by Leksell [ibid, pp.215-218] to be high in all the MNCs studied. The companies had formalized and standardized their international reporting documents on a corporate-

wide (or divisional) basis as to layout, measurement principles, and accounting definitions. Consequently, the reporting requirements from subsidiaries were generally found to differ little within each corporation. Notwithstanding, in some of the companies reporting requirements changed slightly in accordance with the size and the financial performance to the subsidiary. Larger subsidiaries were required to report more than small ones; also, subsidiaries performing unsatisfactorily were imposed new reporting requirements to strengthen control and increase information. A substantial change in reporting requirements was found, although, to exist between wholly owned and partly owned subsidiaries (especially joint ventures). The degree of integration in the standardized reporting system of documents emanating from joint ventures was in general lower than that from wholly owned subsidiaries. Such an integration appeared, however, to be dependent on the integration of the operations of the joint venture into the overall operations of the MNC. Besides, pressures on the joint ventures to adopt the standardized corporate reporting standards tended to increase if the joint venture was consolidated into group accounts.

Another aspect regarding system standardization is the extent to which international reporting between foreign subsidiaries and headquarters differs from domestic reporting between home country divisions or subsidiaries and headquarters. In the sample of companies studied by Leksell the international reporting system was observed to be fairly similar to the domestic systems in use.

The relationships suggested by Leksell between companies' characteristics and the features of the international information systems cannot be generalized due to the excessively short sample base of his study. However, Leksell's research reached far in the generation of valuable hypotheses that can be tested in a study which is designed to use inferential statistics.

Having discussed the design of the internal information systems in MNCs, the use of the data provided by these systems in subsidiary performance evaluation will be analysed next.

4.3.3. Evaluation and Control of Foreign Subsidiaries Using the Formal Reporting System

Purposes and functions of formal reporting systems

The formal internal reporting system in a company performs a number of different functions, namely communication, evaluation, motivation, and direct action [Bursk et al., 1971, ch.2]. Communication represents the very essence of the information system, which is made up of data flowing through the channels formally established across the several segments of the organization. On the other hand, evaluation presupposes the intelligent use of the information communicated, with a view to assess the effectiveness and the efficiency of an organizational unit or of the management responsible for the operations of that unit.

As to motivation and action, they are a result of the evaluation function. Implicit to performance evaluation is the idea that the assessments made at the top will act as the major criticism on which rewards are based. It is known that a manager will tend to optimize those criteria on which his promotion and compensation are dependent upon [e.g. Levinson, 1976]. Therefore, by applying right criteria and accurate judgement the evaluation function should ideally achieve a congruence of goals between the corporation as a whole and its managers, in particular. The discussion of the behavioural implications of performance evaluation are beyond the scope of this study. However, it should always be kept in mind that the sophistication and eventual success or failure of performance evaluation ultimately depend on the people that apply the system and on which the system is applied.

Direct action, the last of the functions of the internal information system, is triggered by evaluation of performance. In the particular and obvious case of unsatisfactory results corrective action must be taken by management at the top. In any case, however, decision making

and action naturally follow the process of evaluation. As Shapiro [1978] indicates, the evaluation system aims at granting a rational basis for overall resource allocation, and provides an early warning of any problem likely to occur with the operations. These two characteristics of reporting systems are inextricably linked to decision making and action.

Evaluation, the central function of the internal reporting system, is by no means an easy task. In any corporate situation, and especially in a MNC, the performance evaluation and control of an organizational subunit is likely to be surrounded by difficulties. Some of the difficulties with particular relevance to the present study will be reviewed next.

Problems in performance evaluation and control

As Brooke and Remmers [1977, ch.10] noted, the international reportings system is largely a measurement device that provides a basis for comparing the performance of the several organizational subunits of a same company. In order to be able to measure, the reporting system has to use quantifiable information which is mainly provided by accounting data. Therefore, any weaknesses bore by accounting information will be necessarily reflected on the performance evaluation process.

Hopwood [1972] points out that data based on accounting systems pose a series of major problems when they are used in the evaluation of performance. In the first place, accounting-based measures and standards are not comprehensive enough to reflect all the relevant dimensions of performance. Secondly, even if accounting information is used only to assess the economic aspects of performance, accounting can rarely approximate the complexity of an organization's economic cost function, which is hardly possible to know with rigour. Thirdly, accounting data cannot properly reflect managerial performance, since the data are primarily concerned with representing the outcome of the operations performed by the unit (i.e. the "what" in performance).

The process giving rise to the final outcome which reflects the efforts of managers (i.e. the "how" in performance), are not adequately captured by accounting. Fourthly, accounting reports emphasize short-term performance while the concern of performance evaluation may be more with long-term results. Lastly, as Hopwood [ibid, p.158] remarks, accounting systems try simultaneously to serve a number of purposes by producing general reports, instead of custom-built information. As a result, **"in trying to satisfy a series of purposes, the reports may fail to perfectly satisfy the requirements for any single purpose"**, performance evaluation included.

So far, general level problems in performance evaluation that lie at the root of the information that is normally used as the basis of assessment have been introduced. The discussion will now proceed by exploring some of the more pertinent issues that create difficulties to the subsidiary evaluation process in MNCs.

Performance evaluation and control in divisionalized companies is traditionally based on the concept of responsibility accounting. In its simplest form, responsibility accounting recognizes various decision centres throughout an organization (i.e. cost centres, profit centres, and investment centres) and traces performance (measured in costs, profits, assets, and liabilities) to the individual managers who are responsible for making decisions about the activities of the centres [Horngren, 1982, ch.5]. The concept of responsibility accounting is constructed upon a framework of premises that should always be present if a fair evaluation is to be achieved. Such premises assume that: 1) resources employed (inputs) and results produced (outputs) are measurable; 2) inputs and outputs are traceable to specific activities; 3) inputs and outputs are within a certain time span, under the effective authority and control of given managers responsible for the specific activities; and 4) meaningful standards can be developed in order to compare and assess actual with desired performance [Miller, 1982, ch.3].

Problems frequently arise in performance evaluation because superiors insist in using the concept of responsibility accounting even when one

or more of the premises mentioned above are not present. In particular, the principle of authority and controllability is most of the times violated due to interdependencies created within companies which **"act to nullify the logic of responsibility accounting and usually result in illusory evaluations of managers and segments"** [ibid, p.35]. The problems arising from interdependencies among subunits of an organization are amplified by transfer pricing and other related techniques of cost allocation [e.g. Farag, 1974]. In MNCs such techniques are widely used due to the need of integrating and coordinating largely scattered operations [e.g. Arpan and Radebaugh, 1981, ch.10]. Common to all is the fact that the headquarters make decisions that have a direct impact on the performance of each subsidiary individually, leaving no room for the discretion of the subsidiary managers to be exercised. Examples of such decisions include, besides transfer prices, charges for the parent technology and the parent services, valuation of fixed assets transferred from one subsidiary to another, internal borrowing from the parent, and leading and lagging practices. Robbins and Stobaugh [1973b] discussed the effects to performance evaluation resulting from the use of some of these practices, showing that companies invariably used the principles of responsibility accounting in performance evaluation even when subsidiary managers could not be held responsible for the results their operations demonstrated. Decisions such as these, taken by headquarters and having a direct impact on the results of subsidiaries were left out of the scope of this study for reasons of size manageability.

The principle of authority and controllability is also often misapplied due to another sort of factors, which are related to the different nature of the environments where foreign subsidiaries operate. As it was extensively discussed in chapters 2 and 3, each host environment where a MNC is established is likely to present a different set of features which have a particular impact on the subsidiaries' activities. Local conditions of an economic nature (such as inflation and exchange rates, market size, and cost of production inputs), and also political conditions (e.g. political stability, political risk), legal conditions (e.g. taxes, import-

export controls, labour law, exchange controls), and social/cultural conditions (e.g. language, religion, attitudes towards achievement and work, labour strikes) all contribute to a subsidiary's performance, and only to a very limited extent can be influenced and altered by the subsidiary's management⁽²⁾. Hence, if the concept of responsibility accounting is applied without top management making an effort to comprehend the peculiarities of each environment misjudgements as to the performance of subsidiary managers are likely to occur. For this reason, and also as a means of anticipating future changes that will have a strong impact on subsidiaries' activities, internal information systems should take into account the external environment characteristic to each operation.

Such a requirement appears to be difficult to fulfil as long as companies use the same criteria to evaluate and control foreign subsidiaries, and domestic operations. Hawkins [1965] enumerates four basic reasons why MNCs feel an incentive to export their control systems, namely the fact that: 1) performance evaluation and control usually only become a major problem once subsidiaries are fully operational and an integral part of the multinational network; control issues are **"seldom a critical problem in getting started initially overseas"** [p.26]; 2) the utilization abroad of the domestic reporting system and the domestic evaluation criteria is less costly than the creation of a new purpose-built system for the international organization; 3) due to the need to consolidate the accounts of all subsidiaries, domestic and foreign, there is a pressure for all the operations in a company to report the same information in the same format; and 4) the once domestic (now international) executives feel more comfortable in their new roles if they continue to use the control system with which they are familiar. Uniformity in the information reported and the control procedures used often lead companies to fail to distinguish in the evaluation of performance the characteristics that are peculiar to each subsidiary. A reflection of such an uniformity is, according to Hawkins [ibid.], the application of the budgetary system to all subsidiaries in exactly the same moulds, and the imposition upon overseas operations of standards identical to those applied to domestic operations. As a result,

performance evaluation practices used for overseas units are seldom effective and successful. Due to the diversity of environmental conditions encountered across the spectrum of host nations it seems that not only a distinction in performance evaluation criteria is necessary between foreign and domestic operations, but also a distinction among the several overseas subsidiaries is required.

There have been attempts in the literature to "environmentalize" performance evaluation systems. The purpose is to introduce in the evaluation criteria used for foreign subsidiaries methods that enable the identification of the effect of environmental factors on subsidiary performance. Morsicato and Diamond [1980] proposed the utilization of the model developed by Farmer and Richman [1965] in which external environmental constraints are directly related to internal management functions (see chapter 2 of the present study). The method suggested by Morsicato and Diamond involves the quantification of the impact of dominant environmental constraints on the efficiency of various management functions, which at best appears to be extremely difficult to achieve. Nevertheless, the Farmer and Richman model, if used in a less elaborate manner, provides a useful tool to comprehend the nature of a particular environment. Consequently, its use in performance evaluation may help in accounting for the effects of the environment on the performance of a subsidiary. Another study to attempt a method of "environmentalization" of evaluation systems was conducted by Jacque and Lorange [1984]. Centred on the case of subsidiaries operating in "hyperinflationary" environments, this study developed a methodology which achieves over a strategic horizon the smoothing of highly erratic, environment-influenced, subsidiary yearly results. Also of somewhat difficult application this method, like the one previously described, nevertheless reflects the concern by members of the academic community about the need to render performance evaluation systems in MNCs sensitive to the characteristics of the local subsidiary environments.

In sum, the consideration of the environmental specificity of each subsidiary is vital for the achievement of a competent and effective performance evaluation and control system in a MNC. Channon and

Jalland [1979, ch.19] observe that increasingly sophisticated communication and data processing technology have made possible the use of more environmental information in the control and evaluation of foreign subsidiaries. No conclusive evidence has, however, been provided in the empirical literature as to the extent to which the overseas environments are taken into consideration in the evaluation of foreign subsidiary and managerial performance⁽³⁾. The production of such an evidence, and the ascertainment of the factors that explain the degree of environmental sensitivity on the part of evaluation criteria are major aims of the present study.

4.4. Informal Information in the Performance Evaluation Process

4.4.1. The Rationale for the Use of Informal Information

Parallel to the formal information system in organizations there is information which is not collected through the institutionalized channels but which is used for the same purposes as the official data. Such an information is called informal.

The use of informal information appears to be widespread in organizations. Authors such as Davis [1953], Simon et al. [1954], Aguilar [1967], Hopwood [1973], Mintzberg [1973], and Clancy and Collins [1979] have found that managers frequently rely for their decisions on data retrieved and reported outside the formal communication network. Specifically, there is evidence that senior executives favour verbal channels (either face-to-face contact or the telephone), and direct observation as means of supplementing, and even replacing, formal sources of information.

Mintzberg [1975] attributes the use of informal information to the limitations of the formal information system. According to him, the typical MIS has four basic weaknesses, namely: 1) the formal system is too limited in scope; 2) the formal system tends to aggregate data,

this resulting in that much of the information produced is too general for the manager; 3) the formal system produces information too late; and 4) the formal system generates information which is sometimes unreliable.

The problem of limitation in scope stems from the fact that formal information systems, as Porter and Lawler [1968] point out, have difficulty in coping with data regarding intangible and non-standardized subjects. By relying on documents and on written information, the MIS does not capture some significant facts that verbal communication is able to provide. Moreover, verbal channels allow for a prompt interaction and feedback apparently so important to managers [Mintzberg, 1973]. Limitation in the information provided is, in particular, due to the circumstance that the formal system often ignores important non-economic and non-quantitative data [Mintzberg, 1975]. Also, as emphasized by Mintzberg [1973, 1975], the formal system is usually weak in providing external environmental information, leading managers to develop their own information systems: **"networks of contact men, informers, customers, trade organizations and other personal sources who feed them external information on an informal, ad hoc basis"** [1975, p.4].

As regards the second weakness of the MIS, that of excessive aggregation of data, it must be noted that information reported has necessarily to be aggregated to suit the limited time of managers. However, in the aggregation process, information may become so general and bland that it is of little practical use. On the other hand, it is known that decision makers need specific detail instead of general aggregation [Mintzberg, 1975]. The way of reconciling these apparently opposite requirements is to provide the detailed information relevant to a given decision only when that decision is being pondered by the user of the information. This brings the issue of the filtering process. The appropriate selection of the information relevant to a manager in each point in time requires a filtering process more intelligent and flexible than the one offered by the typical MIS which uses standard clerical and automated procedures.

The timeliness of information may constitute another important issue for data users, since decisions are often required to be made immediately after (and sometimes even before) the occurrence of the events that give rise to the decisions. The information reported via the formal system is usually tardy due to a number of reasons. First, the nature of the formal reporting is such that information is normally communicated in regular intervals, even if that means that a certain very relevant piece of information must await until the scheduled time of reporting. Second, the data aggregation process, characteristic to formal systems, takes time impeding a prompt disclosure of information. Third, by giving preference to quantitative data the MIS retards the communication of information. As Mintzberg [1975] explains, a considerable amount of time must elapse between the occurrence of an event and its translation into a figure ready to be reported through the formal channel. Events may be known first as rumors and gossip, later as isolated and confirmed facts, and only after this they are quantified and reported. In sum, **"although data can be machine-processed quickly, the nature of the MIS is such that these data are delayed as they become measurable fact, as they get aggregated with other data, and as they are reported to the managers on schedule"** [ibid., p.6].

The fourth and last weakness of the formal system mentioned above, that of unreliability of the information, is associated with the adoption of surrogate measures that do not describe events in the most appropriate manner. The preference for quantitative data by the MIS, is for Mintzberg [ibid.] again the main responsible for the unreliability of some data reported through the formal channels. According to him, something is likely to be lost in the quantifying process to the extent of distorting reality. It should be noted, however, that errors in the measurement and processing of data are natural to the human nature, and therefore, are likely to occur with all forms of information, not only formal but also informal. Related to the problem of data reliability is the problem of trust on the part of the users of the formal information. Sometimes, information although being reliable is not trustworthy. In this case, the weakness lies not in the information system itself but somewhere else

in the organization. As Clancy and Collins [1979] suggest, executives may not trust sources of information over which they have no control, even when such sources produce accurate information. As a result, parallel, non-official information systems may emerge. Similarly, Porter and Lawler [1968] reported that results upon which rewards to managers are made, are frequently cast in doubt by those people to whom the rewards are to be given. This may give rise to the creation of personal, informal records.

The weaknesses encountered in the MIS leading to the use of informal information are perhaps amplified when companies are subject to particularly diverse and dynamic environments. Galbraith [1973] argued that the amount of information that must be processed by an organization in order to ensure a given level of performance varies directly in proportion with the degree of environmental change and uncertainty. Based on this premise, Leksell [1981] hypothesized that informal information accrues to the formal system whenever a higher than normal volume of information is required to respond to particularly difficult characteristics of the environment. Companies would strive to standardize routine information flows in order to avoid information overload, leaving non-routine information needs to be processed on an ad-hoc basis and via informal channels [ibid. p.217]. Such a view perhaps suggests that MNCs which tend not to include environmental information in their formal systems process high levels of environmental information on an informal basis.

The present study, besides attempting to ascertain the main reasons for the use of informal information in subsidiary performance evaluation and control, will also explore the relationship between the characteristics of the formal information systems and the use of informal information. In particular, information relating to the subsidiaries' external environments collected through informal channels of communication will be subject to analysis.

4.4.2. The Role of Informal Information in the Headquarters-Subsidiary Relationship

Empirical evidence helping to explain how and when informal information is used in decision making is marked by its paucity. In the particular case of the MNC, it appears that the frequency with which informal information is used is substantially lower than in the general case of domestic corporations. Mauriel [1969, pp.38-39] in a study involving 15 very large U.S. multinationals, suggested that informal communication between foreign subsidiary managers and headquarters executives was less frequent than between home country divisions and headquarters. This fact has as a consequence that a greater reliance is made on the data from the formal system that is operated between foreign subsidiaries and the parent company. Similarly, Daniels, Ogram, and Radebaugh [1982, p.480] argue that in an international setting, subsidiary managers have much less personal and oral contact with corporate headquarters. Based on these sources, it would appear that the flow of informal information in MNCs is low, or at least lower than in a purely domestic setting. However, this could be a characteristic of only some multinationals, for the extent of informal information used in MNCs was found by Robbins and Stobaugh [1973a, ch.8] to vary according to the size of the corporation's international business. In effect, in small companies relationships between foreign operations and headquarters relied very heavily on personal visits, and much of the decision making in the parent company with a direct impact on subsidiaries was based on information collected through informal channels. In contrast, in large corporations exchange of information was rigid and relied upon highly visible formal channels of communication. Decisions in headquarters concerning foreign subsidiaries were **"built around procedures, directives, and rule-of-thumb standards"** which reflected the impersonality with which executives in the parent company approached subsidiaries. This condition was also found to exist in domestic subsidiaries of large corporations. However, it was thought to be aggravated in the international context where distance usually

provides serious obstacles to direct exchanges [ibid., pp.148-153].

Another factor to consider in the understanding of the level of use of informal information is the corporation origin. All the findings above concern U.S.-based MNCs, and there are reasons to believe that in non-U.S. companies there is a smaller emphasis on formality. If this is so due to cultural differences or simply due to differences in size - the average non-U.S. MNC is arguably smaller than the average U.S. MNC - has not been ascertained. In the particular case of European multinationals, authors such as Lombard [1969], and more recently Egelhoff [1984] have observed a strong tendency for enterprises to develop informal communications on their international network of operations. As Lombard pointed out, European MNCs are characterized by a high informality of communications and responsibility, and an emphasis on personal relationships and contacts among management. Similarly, Egelhoff defended that MNCs from Europe give more attention to personal contacts and monitor more closely behaviour than their U.S. counterparts. American multinationals, in contrast, were said to monitor more closely subsidiary output and to rely more extensively upon formal reports.

These opinions appear to be confirmed by Leksell [1981] in his study of six Swedish MNCs. The reliance by senior headquarters executives on reports forwarded by subsidiaries via the formal system was found to be very low. To extract information about subsidiary operations informal communication channels such as telephone conversations and personal visits were preferred to the formal reports forwarded by subsidiaries. Consequently, the MIS emerged as more of a confirmation of information already known. Also, the role of the formal reports became limited to consolidation purposes and the mere historical analyses of subsidiary operations [ibid., pp.223-224]. Based on these findings, Leksell concludes that the standardized information of the type contained in the formal system does not satisfy the information needs of headquarters executives in MNCs. Headquarters staff and line managers are said to be compelled to create personal and informal links to satisfy their information needs, because the formal system fails to provide the adequate information in the right timing.

Besides, as Leksell acknowledges, there is an inherent problem with standardized information systems as regards their capability of satisfying the diverse and constantly changing information needs that normally arise in corporations as complex and varied as the MNCs [ibid., p.223].

From the evidence just described it appears that the informal information often acts as a substitute for the information provided by the institutionalized system. For example, Leksell [1981] observes that **"the limited use of subsidiary reports among senior executives raises the question of how valuable [the formal] systems are for other than routine control purposes"** [p.223]. Also, it is generally accepted that the use of informal information is an "evil" only necessary because of the imperfections of the formal system. Hawkins [1965], on his observation of U.S. MNCs, found the widespread use of personal visits to subsidiaries as a means of overcoming the limitations of the MIS, and concluded that such ways of gathering information are a rather poor use of top management time. He asserts that:

"[Frequent plant visits arise] because the management control system utilized by the home office is unable to overcome the distance and cultural gap between the home office and its overseas field operations. When the uncertainty builds up to a sufficiently high level, the executive involved usually resolves the situation by a personal visit to the foreign area involved. Unfortunately, at best, such exertions of personal control result only in temporary solutions and do not correct the basic problem, the defective control system."
[ibid.,p.28, emphasis added]

The argument that the use of informal information can be dysfunctional inside the organization is illustrated by Leksell [1981] when he describes the consequences of the increase in the flow of informal information utilized by MNCs in the evaluation of subsidiary performance. The emphasis on informal information for performance evaluation purposes is said to give rise to the emergence of a number of sub-goals regarding subsidiary performance, which usually have dysfunctional effects. As Leksell explains:

"The pattern observed was that different headquarters' staff or line executives emphasized different operating areas in their communication with the subsidiaries. For example a divisional product manager may ask about sales levels, a financial manager about increases in inventory levels, and a corporate production manager about waste and material flows. The subsidiaries sometimes interpret these comments and questions as signals about headquarters goals and expectations, i.e. as those items against which subsidiary performance is measured. As the number of "goals" increases, the likelihood of goal conflicts increases too [...]. As a consequence, the subsidiaries easily become confused about headquarters expectations." [ibid., p.224]

The established idea that informal information acts as a substitute for the information provided by the formal system, and that the use of informal information is dysfunctional for the decision making process can be questioned in face of a study conducted by Clancy and Collins [1979]. In their analysis of the attitudes of 148 executives, Clancy and Collins reached some interesting and controversial findings. One of such findings was that those managers with both formal and informal accounting systems had independent attitudes towards the systems [p.28]. Formal and informal accounting systems were equally perceived positively both being considered moderately efficient and effective. This result contradicts the hypothesis that informal systems would compete with, and partially supplant, formal systems. As a consequence, Clancy and Collins conclude that informal information should perhaps be considered **"a useful and necessary adjunct to the formal system rather than an unnecessary dissipation of resources"** [p.29]. This being so, informal information should be regarded as a supplement instead of a replacement for the formal information. The implications of these tentative conclusions are far reaching. As Clancy and Collins argue:

"If the conclusions are subsequently supported, then the direction of systems design and improvement should be changed. No longer would the elimination of informal systems be an important objective. Rather, improving compatibility between formal and informal systems should be stressed."
[ibid., pp.29-30]

The results from Clancy and Collins' study are difficult to reconcile with the empirical evidence concerning the use of informal information

in MNCs. This is mainly due to the fact that the Clancy and Collins study addresses the problem of the utilization of informal information in the context of middle-level management in domestic corporations, and not in a headquarters-foreign subsidiary type of setting. Its findings are, however, very relevant and the present study will attempt to ascertain whether informal information used in a MNC for performance evaluation purposes is regarded mainly as a substitute for or a complement to the formal information system.

4.5. Summary and Conclusions

The present chapter introduced the concept of organizational control and discussed the essence and nature of the performance evaluation process in the multinational context. Different objects and types of control were reviewed together with the factors believed to determine managements' choice for particular features in the subsidiary performance evaluation process. Due to the fact that performance evaluation makes use of information retrieved and communicated outside the formal reporting channels, as well as of data reported via the institutionalized information system, an examination of these two types of information was considered necessary.

Organizational control may be viewed at an abstract level as a means of maintaining a particular type of open system - the business organization - in a constant internal stable condition subject to a simultaneous permanent state of adaptation to the ever changing conditions of the external environment. In this sense, internal control is a determining factor of organizational success and survival.

The operationalization of this concept of organizational control requires that the control activity in an enterprise be placed at two essentially different levels: the strategic, and the operational

level. The former was addressed in the previous chapter when the MNC was approached not as an isolated phenomenon but as an entity in constant interaction with its particularly complex environment. The operational level, in turn, was explored in the present chapter. Here, the control activity was viewed as a continuous on-going search for an effective allocation of organizational resources guided by the achievement of goals or targets. This process is consubstantiated in an activity encompassing the monitoring of the performance of organizational subunits.

The consequences of the monitoring of performance within organizations are far reaching, since the rewards or penalties that follow have a strong impact on the future development of the organizations. Such rewards and penalties may be of two different natures, i.e. of an organizational nature, when they involve decisions regarding the allocation of physical resources across subunits, and of a personal nature when they involve the allocation of tangible and intangible resources among the managers responsible for the subunits. In order to be able to distinguish between these two types of rewards and penalties the performance monitoring process should allow, at a theoretical level, a differentiation between the performance of the organization as such, and the performance of the management in the organization. At the root of this distinction lies the fact that organizational performance is a consequence of factors not all of them under the influence and control of management. Therefore, the process of performance monitoring should be capable of recognizing that success in the attainment of organizational goals is only in part dependent on managerial competence. For this reason, the chapter emphasized the existence of two objects of assessment, namely output which focuses on "ends" or on the "what" in performance, and behaviour which concentrates on the "means" to the ends or on the "how" in performance.

Regardless of the object of assessment, the approach to the monitoring of performance can be highly diverse. Different instruments, practices, rules and so forth may be employed by companies to assess the performance of their subunits or their managers. Basically, two

major types of control were described in the chapter. One, bureaucratic control, is characterized by the utilization of an explicit set of codified measures and rules which define desired performance. The instruments employed in the monitoring of output are essentially based on the internal reporting system, and include measures and targets formally set up in the organization. In turn, monitoring of behaviour tends to be helped by instruments such as company manuals, institutionalized internal rules of conduct, and MBO techniques. In contrast, the other major type of control - cultural control - privileges informal and implicit control mechanisms. Monitoring of performance is built around a web of interpersonal interactions, whose complexity and sophistication may range from a relatively casual network of contacts and relationships (the personal type of control) to a very complex and well articulated social structure drawn from a strong company-wide culture.

These two stereotypes of organizational control epitomize the differentiation between the formal and informal approaches to the monitoring of subunits, which necessarily coexist in any organization in differing degrees. Many factors have been suggested in the literature to influence the degree of bureaucratization and informality of a company's control system. Such factors were reviewed in the chapter with the purpose of identifying relevant variables that may explain in the study why certain performance evaluation practices found in MNCs are used in preference to others.

After introducing the formal and informal dimensions of performance evaluation, the chapter turned to each separately. The formal subsidiary performance evaluation process in MNCs cannot be understood without a careful analysis of the reporting channels set up between headquarters and foreign subsidiaries and through which information flows. The formal communication channels were viewed in the chapter as a "connective tissue" linking all the parts of an organization, and providing the data required for the monitoring of the organization's subunits. In this context, the concept of MIS was introduced and its bias towards information of a financial nature explained.

The chapter proceeded by revealing how the international reporting system is designed in MNCs. Despite the scarce evidence available, it was possible to provide some insights into the characteristics and nature of the information contained in multinationals' reporting systems, as well as into the content, reporting frequency, and standardization of the items forming the reporting system. Worth mentioning here is a study reported in the chapter which revealed the existence in some corporations' systems of formal reports on the economic and political conditions encountered by subsidiaries in the host countries. Such reports were submitted to headquarters periodically and in some instances on a very frequent basis. This appears to demonstrate the concern in certain companies for the local environmental conditions faced by foreign subsidiaries.

The information provided by the formal internal reporting system is naturally used for performance evaluation purposes. However, this is not the sole application of such an information, for other functions are performed by the MIS, namely communication, motivation, and direct action. Evaluation is, notwithstanding, the central function of the reporting system, and its exercise is generally surrounded by difficulties of different nature. Such difficulties, in particular those associated with the MNC, were discussed in the chapter in some length. A basic problem in the evaluation of organizational subunits is related to the inherent shortcomings of accounting information, which lies at the root of the measurement process. Additionally, most of the problems arising in performance evaluation derive from the application of the principle of responsibility accounting in circumstances where one or more premises on which this principle is based are not fulfilled. Especially, the premise of authority and controllability of subunit managers is often violated when transfer prices and other techniques of cost allocation are imposed by the centre leaving no room for subunit managers to exercise their discretion.

Another situation in which the principle of authority and controllability is misapplied arises when the performance evaluation process of a MNC fails to take into account the different nature of

the environments faced by foreign subsidiaries in their host countries. As a consequence, in such cases misjudgements as to the performance of subsidiary managers are likely to occur. Also, the capability of anticipating changes in the environments that will have an impact on subsidiaries' activities is likely to be virtually non-existent. The consideration of the environmental specificity of each subsidiary is, therefore, vital for the achievement of a competent and effective performance evaluation and control system. Modern communication and data processing technology makes feasible the use of environmental information in the monitoring of foreign subsidiaries. However, there is no conclusive evidence as to the extent to which the overseas environments are taken into consideration in the performance evaluation process of subsidiaries and managers. The production of such an evidence is a major aim of the present study.

Having explored the theory and the practice of formal subsidiary performance evaluation, the chapter turned to the informal dimension of performance assessment. Such a dimension was identified with the use of informal information in the evaluation and control of subsidiaries, i.e. with information not collected through the institutionalized channels of communication set up between the subsidiaries and the headquarters of a company. The reasons for the use of informal information were reviewed, which the empirical side of the present study will try to confirm and expand.

In order to understand the circumstances in which informal information is called upon in the monitoring process, the role of informal information in the headquarters- subsidiary relationship was analysed. The extent of use of informal information was discussed in the light of the corporation internationalization, size, and geographic origin. Also, the way in which informal information interacts with the formal system was studied. Here, the theses defended by authors are contradictory. In effect, there has been a tendency to regard informal information as a substitute for the information provided by the institutionalized system. In addition, it has been generally accepted that the use of informal information is a necessary evil, sometimes even dysfunctional for the organization. However, recent

studies have suggested the possibility of informal information being acting as a useful and necessary supplement to the formal system. The implication is that informal information should not be seen as a waste of resources, and that efforts should be made in improving the compatibility between formal and informal systems, rather than in eliminating the informal side of information collection and analysis. The contradiction found in the studies reviewed in the chapter cannot be resolved, because their findings are difficult to reconcile. In the present study the extent of use of informal information in foreign subsidiary performance evaluation will be analysed. Also, an attempt will be made to determine whether informal information in MNCs is regarded essentially as a substitute for or a complement to the formal information system.

Footnotes

- (1) A vast literature in organization has suggested, on the basis of empirical research, that the use of control mechanisms leads to organizational effectiveness. Examples are Bell [1965], Lawrence and Lorsch [1967], Tannenbaum [1968], Farris and Butterfield [1972], McMahon and Perritt [1973], Khandwalla [1973], Turcotte [1974].
- (2) The extent of environmental control exercised by people in organizations has been studied by Thompson [1967], Galbraith [1977], and Lowe [1981], among others.
- (3) Later in chapter 6 this point will be demonstrated when the major empirical studies on subsidiary performance evaluation in MNCs will be reviewed.

CHAPTER 5 - SUCCESS INDICATORS OF DIVISIONAL OPERATING PERFORMANCE

5.1. Introduction

Having reviewed the nature of the processes of internal control and subunit performance evaluation in organizations, the present chapter will turn to the discussion of the main instruments of assessment of division operating performance used in the internal control and evaluation activity.

The measurement of the actual performance of an organizational subunit so that it may be compared with what is desired or expected, requires the utilization of indicators which gauge success in achieving standards previously set. The specification of such indicators represents a major difficulty in subunit performance evaluation and control [Kaplan, 1982, ch.13]. In reality, the selection of performance indicators should fulfil certain criteria which are in themselves difficult to accomplish. In the first place, success indicators should represent top management goals which provide a conceptual structure to the performance evaluation process [Hornngren, 1982, ch.20; also AAA, 1971]. Goals and objectives are usually multiple, dynamic, and partly conflicting, and therefore, the respective performance indicators will have similar characteristics. On the other hand, to perform their role appropriately success indicators should be complete, accurate and neutral. As Emmanuel and Otley [1985, ch.8] demonstrate these are attributes which in practice are almost impossible to realize. Despite the difficulties encountered, performance evaluation and control rely on measures of success which encapsulate organizational activity and provide a summary indication of output or behaviour.

The chapter examines the measures of divisional performance most commonly found in the literature. It starts by discussing the two classic measures of subunit performance: return on investment (ROI) and residual income (RI). These measures represent a development from the use of profit as an indicator of success, and are intimately associated with the profit notion in performance evaluation. A brief history of the prescription and use of ROI is presented, together with a discussion of the rationale for the RI concept, which is sometimes seen as a substitute for ROI. The conceptual validity of RI raised a debate which involved a considerable number of academics. This debate is reviewed in the chapter, and an attempt to structure areas of convergence and disagreement between authors is made. The examination of the two classic measures ends with a discussion of their advantages and limitations of practical nature.

An ubiquitous tool of performance evaluation is the budget. The chapter analyses the various roles of the budget and concentrates on its utilization as an integrated instrument of performance assessment. In particular, the managerial use of budgeting information is studied with reference to the attitudes of managers towards the budgetary standards and the emphasis placed on budgetary deviations.

Finally, the chapter focuses on a different category of performance indicators: those based on non-financial data and on qualitative information. It is argued that these indicators should supplement, rather than replace, financial measures in general and profit-based indicators in particular. The justification for the use of non-financial measures of divisional performance is presented in the chapter. Also, the main criteria that should assist in the selection of a battery of non-financial indicators to be employed in a given subunit are discussed both in the light of the basic characteristics the measures should possess and the key management dimensions the measures should monitor.

5.2. The Classic Measures of Divisional Performance: the Rate of Return on Investment and the Residual Income Methods

The use of the rate of return on investment (ROI) and residual income (RI) as measures of divisional operating performance emerged as a development of the application of the simple notion of profit. They are traditionally regarded as the measures of performance "by excellence".

5.2.1. Developments in the Use of ROI

The gradual adoption of a measure such as ROI that relates profit to the resources employed in its generation, was associated with the diffusion of the concept of investment centre among companies which had adopted decentralized profit responsibility. The history of ROI is, therefore, to a certain extent, also the history of corporate divisionalization.

A ratio relating profit to total assets is reported to have been used systematically for the first time in an internal managerial context in about 1919 by the E.I. Dupont de Nemours Co. [Horrigan, 1968]. This company developed a model of analysis consisting of a chain of performance indicators whose starting point was ROI. Such a model was popularized as the "Dupont formula", which started as a triangular ratio system consisting of ROI at the top, and a profit margin ratio (net income/sales) and a capital turnover ratio (sales/total assets) at the base. The Dupont formula was gradually refined in the 1920s and subsequently through the breakdown of the profit margin and the capital turnover ratios. In this way, the operating results in terms of revenue, expense and investment (both in fixed and current assets) could, in every company division, be related to the respective ROI [Gorelik, 1971].

The concept behind the Dupont formula was quickly adopted by very large corporations. For example, General Motors developed a complex ratio model which was "used to measure the effectiveness of each division's operation", according to the description of Alfred Sloan [1964, p.141]. Despite the prompt acceptance of the ROI concept by the largest corporations, its widespread diffusion among the bulk of the industry in the U.S.A. was remarkably slow, as noted by Horrigan [1968] in his concise history of financial ratio analysis. The occasional efforts made in the literature, such as in Bliss [1923], to publicize the possibility of ROI to serve as a basis in the development of an integrated ratio analysis system for internal decision making purposes went largely unnoticed until the 1950s, when a sudden interest emerged. As a result, many companies began using ROI on a regular basis for the purpose of subunit performance evaluation.

The shift from absolute profit to ROI as the fundamental tool used in internal performance evaluation was the result of the implementation in companies' structure of the investment centre concept, and the consequent abandon of the profit centre concept. This association between ROI and investment centres has been shown by a number of studies. Mauriel and Anthony [1966] in a survey in which 2658 large U.S. corporations participated found that most divisionalized companies had already adopted the investment centre concept and were using ROI as the basic measure of divisional performance. In effect, 74 percent of the 2169 companies that were decentralized reported to have introduced investment centres by the time of the Mauriel and Anthony study. The timing of the introduction of the investment centre concept and of ROI shows a rapid growth during the late 1950s and early 1960s. Of the 851 respondents to a second phase in the Mauriel and Anthony study, only 21 percent had used ROI consistently before 1950. In contrast, in the short period of ten years that preceded the study as many as 59 percent of the companies surveyed had actually introduced investment centres and ROI [ibid., pp.99-101].

Another study conducted by Reece and Cool [1978], offered more up-to-date evidence on the use of the investment centre concept. The study involved a survey in which 620 of the largest U.S. companies

participated. The findings show some progression in the diffusion of investment centres as opposed to profit centres in the twelve years since the Mauriel and Anthony study. This time, 77 percent of the 594 firms that were decentralized reported to have introduced the investment centre concept. Nearly all these corporations (93 percent) employed ROI as the main divisional performance measure. A noteworthy finding of the Reece and Cool study is that the incidence of the use of investment centres tended to increase with the size of companies. In fact, only 48 percent of the small decentralized firms (sales under US\$100m) had investment centres, whereas 86 percent of the large companies (sales over US\$1000m) had this type of responsibility centre [ibid., pp.29-30]. The growing widespread use of the investment centre concept was again confirmed by Vancil [1979] who, based on responses given in his survey by 291 U.S. firms, found that 86 percent of all the divisionalized companies included in this sample, had investment centres instead of profit centres.

In the U.K., the interest in the use of ROI, and in ratio analysis in general, was generated by the British Institute of Management as a device for making inter-firm comparisons in order to help managers in their control and planning functions [Horrigan, 1968]. A pioneer study was conducted by a group set up by this institute and published in 1956, which adopted the premise that ROI was the primary ratio to which all other ratios would be related [ibid.]. As a consequence, elaborate listings of performance indicators were devised, always following the principle of the **"return on investment ratio pyramid notion"** [ibid., p.293]. A similar idea was defended by Nelson [1960] who suggested the utilization of a system involving secondary ratios grouped into three classes - operating ratios, expense ratios, and financial ratios - which derived from the primary ratio : ROI. Such a battery of indicators was to be used **"to check the activities of individual departments, divisions or profit centres"** [ibid., p.189], which reflects the internal management orientation of the approach. The advantages from the use of an integrated system of ratios were emphasized by Nelson [ibid], this reflecting the very **"raison d'etre"** of his or any other similar model of ratio analysis based on ROI. As Nelson explains, the advantages are two-fold. First, secondary ratios may be used to explain differences from the forecasted amount in ROI,

since they enable the identification of the reasons for such differences. Second, ratio analysis may act as an early warning device, whenever one of the secondary ratios differs from the forecasted amount, this meaning that unless a compensating variation is produced, the expected ROI will not be achieved.

Evidence on the extent of the use of the investment centre concept and ROI among U.K. companies, was first provided by Tomkins [1973, ch.8]. In a survey which obtained the participation of 65 firms, Tomkins found that the use of ROI as a divisional performance criterion was widespread. In addition, the study reported that the measure was generally used both to evaluate the performance of divisions and to assess the performance of managers. In effect, 91 percent of the 44 companies that responded reported that they were using ROI in the evaluation of divisions, and ranked this measure as the most important of all the performance indicators utilized. Similarly, 83 percent of a total of 46 firms said that they were employing ROI to assess the divisions' heads, having attached to the measure a high level of importance [ibid. pp.158-166]. Despite the narrow sample base of the Tomkins study, which requires the generalization of the survey results to be made with some caution, it appears safe to conclude that by the early 1970s the notion of investment centre and the consequent application of ROI were already dominant in British divisionalized companies. A similar situation would indeed be encountered across Europe, as it can be concluded from Franko [1974].

More recently, a survey conducted simultaneously in the U.K. and in the U.S.A. by Scapens and Sale [1981] managed to provide comparable evidence on the practices of divisionalized companies from both sides of the Atlantic. An identical questionnaire was administered in both countries, having the results of the survey been based on 211 divisionalized companies in the U.K. and 205 divisionalized corporations in the U.S. The findings obtained revealed a slightly higher preference for ROI in American than in British firms. While in the U.S. ROI was the performance measure most commonly used, in Britain this measure was second to another one (profit before interest and taxes). Nevertheless, the incidence of the use of ROI in both countries was found to be far less than the one reported in previous

studies. Only about half of the participants in the survey (45 percent in the U.K., and 52 percent in the U.S.) did report the regular use of ROI as a measure of divisional performance [ibid., p.395]. This result is surprising insofar as the overwhelming support for ROI revealed in previous surveys appears not to be confirmed here.

The reasons explaining this contradiction were not provided by the Scapens and Sale study. As it will be discussed later in the chapter, the most severe criticisms have been made to ROI by many authors. As a consequence, a strong interest in finding alternative criteria for the assessment of subunit performance was generated. This fact could provide an hypothetical explanation for the drop in popularity of a measure such as ROI. Other criteria would perhaps be being employed in place of ROI. These would include RI, the budget as an integrated evaluation instrument, and a number of non-financial and qualitative indicators. All these success criteria will be reviewed in the chapter.

Opponents of ROI have proposed a new criterion, generally known as residual income, which, due to the attention received in the literature and the emphasis given in management accounting texts, became a classic measure of divisional performance. This measure is discussed next.

5.2.2. RI as an Alternative Measure

RI has in common with ROI the fact that both relate profit to the investment base. However, instead of having the form of a ratio, RI is an absolute figure which, when applied to divisional performance measurement, represents the remaining net income of a division after meeting an interest charge based on the value of the division's capital assets.

The development of the RI criterion is attributed to the General Electric Company in the U.S.A. [Miller, 1982, ch.3], and its use has been extensively advocated in the literature. One of the earlier

reports was made by Lewis [1955] in an extensive case study of General Electric. Later, a number of academics took an interest in the method, and started introducing it in their writings. Among the first were Solomons [1965], and Anthony, Dearden and Vancil [1965] who, noting the use of RI by General Electric, advocated its application to divisionalized companies.

Surveys of corporate divisional performance practice have revealed that the use of RI is circumscribed both in the U.S. and in the U.K. to a relatively small number of companies. This measure does not enjoy in practice, therefore, the widespread acceptance and success known by ROI. Mauriel and Anthony [1966] found that less than one third of the companies studied used RI on a regular basis. They report that only 7 percent of the 851 divisionalized companies⁽¹⁾ in their survey were employing RI as the sole basic measure of subunit performance. And jointly with other indicators RI was employed in another 23 percent of the total cases. The introduction of the measure had occurred not very long ago. For 44 percent of the companies using RI at the time of the study, the measure had only been introduced in the 1960s. And for another quarter, RI had started being used between 1955 and 1959. In another study, Reece and Cool [1978] demonstrated that in the period of twelve years that followed the Mauriel and Anthony survey, the diffusion of RI among companies did not progress. In fact, the extent of use of this measure in the late seventies was found to be as limited as in the mid-sixties : only 30 percent of the firms with investment centres analysed by Reece and Cool had adopted RI as a sole or joint measure of divisional performance.

The results obtained by Tomkins [1973] in his survey of the U.K. practice suggested that British firms favour RI slightly more than American companies. In effect, 48 percent of the respondents acknowledged the regular use of RI when evaluating the performance of divisions. The use of the measure in the assessment of the divisions' managers was found to be lower, however : 39 percent of the respondents. The importance attached to RI by those firms that employed the measure was only fair, since other indicators such as ROI, net profit, and controllable operating income were generally

considered more important.

As to the survey conducted by Scapens and Sale [1981], two main conclusions can be drawn. One is that the use of RI did not advance since the 1960s and 1970s. The other is that RI is more frequently encountered in British than in American corporations. RI was found to be regularly in use in 37 percent of the cases in the U.K. and in 29 percent in the U.S. These results are remarkably close to those obtained by the previous studies described above. The acceptance of RI by the industry is, therefore, relatively low in both countries, especially when compared with other indicators of performance. In reality, Scapens and Sale found that RI lies at the bottom of popularity, even in Britain where its use is more widespread [ibid., p.395].

In apparent contrast with this lack of enthusiasm towards RI on the part of the practice, lie a number of academics who have endeavoured to demonstrate the virtues of the measure. To these authors, RI is seen as a criterion that minimizes certain weaknesses of profit used as an absolute figure and ROI. The motivation to develop a measure such as RI was, in fact, founded in the belief that the continuing use of absolute profit and ROI as divisional success indicators would inevitably lead to meaningless appraisal. The argument against these two measures is based on the following reasoning: On one hand, if absolute profit is the sole indicator of the success of a division and of its management, then a manager with access to unlimited capital at a low rate of interest or at no charge at all, may increase the absolute profit of his division by using more and more capital as long as he can obtain any positive return (if he gets the capital free), or a return in excess of the cost of capital. On the other hand, if ROI is used it becomes extremely difficult to compare ratios based on different amounts of capital. As Solomons [1965, p.61] asks : **"is a high rate of return on a small capital better or worse than a lower but still satisfactory return on a larger capital?"**. The answer is, of course, impossible if the rate of return is not linked to the cost of capital, and other factors like capital rationing are not pondered upon. Moreover, when managers are required to maximize their divisions' ROI they may prefer not to expand investment when they are

that reflects the opportunity costs derived from the assignment of a given amount of capital to a particular unit. In other words, if RI is to be applied to the assessment of divisional management the division investment base must be under the control of the managers in the division and not of those in the head office.

The question of the degree of controllability exercised by the division management over the investment base generated a long debate which divided academics in the support for RI.

5.2.3. The Debate Over the Conceptual Validity of RI

The validity of the argument for charging interest to divisions in assessing performance was strongly contested by Amey [1969a, ch.7; 1969b; 1975] who maintained that the use of the RI concept in divisional performance evaluation was either useless or adversely misleading, depending on the objective set to a division. As he points out:

i) If the objective which divisions are set is to maximise the rate of return on capital, imputing a charge for interest is unnecessary and achieves nothing.

ii) If, on the other hand, the objective is to maximise profits before charging interest, the levying of a charge for the use of capital, however this charge is defined, will in general frustrate this purpose. In this case, it will not be in the overall interests of the firm to instruct divisional managers to maximise residual income because this is likely to lead to their using the resources at their disposal suboptimally (less fully than they should).

iii) Where a (substantially autonomous) division is set a residual income [...] target - Professor Solomons' preferred measure in such a case - whether it is the result of an optimisation or not, the last remark also applies: this goal may induce suboptimal behaviour in the division compared with that which would result if interest were ignored." [Amey, 1969b, p.5]

Despite this opposition to RI, a partial agreement between Amey and Solomons can be found for the situations where the capital base of a division is not under the control or influence of the division management. Both authors appear to agree that, in such cases, RI is

obtaining relatively high returns, if the new investments have the effect of lowering the divisions' average rate of return. This is likely to occur even when the incremental revenue would be still far in excess of cost and would enhance the corporation overall rate of return.

To achieve a fair evaluation of the success of a division it would be necessary, therefore, to take the cost of capital into account. RI does just that, reason why it has been favoured in the literature. The implementation of the RI method is not, however, free from problems. A common difficulty is the determination of the cost of capital to be charged to a division. Such an amount is calculated as the product of two elements: the volume of capital employed by the division, and the rate (or rates) of interest charged on that capital.

Conceptually, the rate of interest on the capital employed by a division is determined in different ways, according to the company's capital structure. In the simplest case of a company which is wholly financed by equity capital, the rate of interest is **"the rate at which the market capitalizes the company's expected earnings"** [Solomons, 1965, p.157]. This means that, if expansion of a division is assumed, any new investment must be expected to earn a rate of return equal or lower than the estimated rate of return, prior to the investment, on the company's current market price of shares. Accordingly, the cost of capital is understood as an opportunity cost, representing the sacrifice demanded for not getting the benefits derived from an alternative application of resources. In the more complex case of a company with different sources of capital, the determination of the rate of interest to be charged on the capital employed should be based, according to Solomons [ibid., ch.5], on the weighted average cost of raising money from all the sources of capital utilized by the company.

The use of RI has been advocated for both subunit output performance and managerial behaviour performance, provided that controllable costs and revenues are identified in the assessment of the latter [ibid., ch.3]. The concept of controllability in a RI context has, besides, to be extended beyond operating costs and revenues to the component

an irrelevant measure of subunit performance. However, when suggesting a solution, they propose different indicators, Solomons supporting the use of ROI [1965, e.g. pp.64, 151, 154], and Amey rejecting the validity of such a ratio and advocating instead that the efficiency of a division is best gauged in terms of **"profits in relation to optimal budgets"** [1969a, p.146]. It is for the cases where the division management has considerable influence on the investment level that Amey is in contradiction with Solomons. According to Amey, charging interest of existing divisional assets may lead to suboptimal decision making because it can make divisional management to restrict output below the level which would be attained if no charge was imputed. In other words, if an interest charge on the capital of the division is levied the resulting profit maximizing output (i.e. the point where the difference between the total revenue and the total costs is at its highest) is inferior to the profit maximizing output before imputing interest, as it was demonstrated by Amey [1969b, p.5; 1975, p.62].

A reconciliation of Solomons' and Amey's approaches was attempted by Samuels [1969] who argues that when Amey criticizes RI he **"only shows that the charging of interest to divisions would lead to sub-optimal company behaviour by the divisions, within a company where central management are responsible for the level of capital used by the divisions"** [ibid., p.3, emphasis added]. For this reason, Samuels concludes that the two authors were not really defending opposite views because they were dealing with two different business situations. While Solomons defended the use of the RI concept for divisions where managers had ample discretion upon the volume of capital employed, Amey argued against the use of such a concept but only demonstrated its alleged dysfunctional effects for those cases where the investment decision making authority of the division was restricted.

None of these views is shared, however, by Tomkins [1975a, 1975b] who alternatively believes that RI is a valid performance measure for divisions that have no influence on the volume and value of the fixed assets at their disposal. In contrast, RI is believed not to be valid for those divisions where managers are free to select their own

capital assets. As regards the latter situation, Tomkins argues that RI is a superfluous measure of performance and recommends the use of a cash flow comparison basis instead. As he explains, if the appraisal of the performance of an investment is based on the comparison of actual with budgeted RI, the interest and depreciation charges would have to be kept as budgeted. In this case, **"the residual income variance [would] always be equal to the difference between the budgeted and actual cash flow for the period and so, [...], it is apparent that residual income is only an elaborate mechanism for achieving what [can] be attained far more simply"** [1975a, p.50]. Behind this reasoning is the view that the performance of a division is identified with the ex post appraisal of the capital investment decision⁽²⁾.

When rejecting RI as an appropriate performance measure for divisions responsible for their investments, Tomkins does not obviously support Solomons. But he does not support Amey either, since he believes that RI is a valid subunit performance measure when divisional managers are not formally responsible for the investments. Tomkins' arguments are based on the premise that managers of such divisions, even not having any power over the level of fixed assets have, nevertheless, some control upon the divisional total investment. In effect, divisional managers are expected to decide at what output volume their divisions should produce, and in this way they indeed influence the level of working capital employed which is a function of the output volume. Following this thought, and considering that Amey acknowledges in his book that working capital is a function of the output level, Tomkins states that it is extremely difficult to understand how can Amey reject the notion of an interest charge on capital [Tomkins, 1975a, pp.40-43, p.45; 1975b, pp.163-166].

An answer to this question can partially be found in Bromwich [1973] who interprets Amey's position by stating that the total costs curve in Amey's model **"already incorporates all the costs associated with additional output"** [p.128]. This assertion is based in that the marginal costs scheduled to be equated with marginal revenue are considered to include an interest charge on working capital which represents a cash outlay cost as the payment to a contracting factor.

This, of course, holds the assumption that the funds necessary to the marginal investment in working capital are obtained by borrowing.

In a later paper, Amey [1975] corroborates this interpretation of his own thought, and adds that **"both businessmen and economists treat [the funds required for an additional investment in working capital] as a cost, and rightly so"** [p.62]. If a classification of Amey's argument along these lines is accepted, then all his criticism of Solomons would be reduced to a mere matter of differences in the definition of total costs, as Tomkins remarks [1975a, p.45; 1975b, p.163]. Furthermore, Tomkins argues that Amey's view of corporate practice as regards the inclusion of a cost component derived from divisional operating capital needs is removed from the reality. Mentioning two empirical studies [Baumes, 1961, and Tomkins, 1973], Tomkins reveals that most divisions do not seek financing from sources outside the company group. In fact, when divisions need cash to meet their responsibilities, they turn to centralized corporate bank accounts or their own local bank accounts that are refilled by the company headquarters. It follows from here that **"unless the company head office orders an imputed charge to be made in the division's profit and loss account, the division will bear no interest charge at all"** [1975b, pp.163/4].

The review of the debate on the validity of RI as a measure of divisional performance conducted in this section sought to uncover and stress the major assumptions adopted in the authors' argument. Indeed in certain crucial points of the controversy the impartial reader feels the necessity for empirical data to consubstantiate claims made by the authors. This is the case of a central assumption in Amey's argument that divisions normally include in their profit and loss accounts a cost component derived from the interest charges on funds for working capital requirements, obtained by divisions through external borrowing. Evidence from the practice is provided by the recent study of Scapens and Sale [1981; 1985], which reviewed firms both in the U.K. and U.S.A. This study found, generally, that in few companies divisions had authority to raise finance externally. In only 14 percent of the cases in the U.K. and 12 percent in the U.S. divisions were allowed by the head office to use finance sources

external to the group. In the limited number of companies that had such an authority divisions were only permitted to use short-term sources - suitable primarily for financing working capital demands [1981, p.396 and 400]. It would seem, therefore, that the assumption on which Amey's position is based only holds for a minority of cases.

Another aspect with relevance to the RI debate, which also requires empirical evidence is the extent of division management autonomy in decisions involving the investment in capital assets. Here again the Scapens and Sale [1981] study provides useful information. In general, division managers of British and American companies were found to retain very limited capital investment autonomy. Formal authorization mechanisms were largely widespread: in 88 percent of the corporations in the U.K. and 93 percent in the U.S. the head office had to give permission to divisions for all capital expenditure or for projects above a certain amount [ibid., p.398]. In the latter case, the limits above which authorizations were required for divisions to be allowed to make investments were quite low. The comparison of the average ceilings with the average annual capital expenditures of the corporations led Scapens and Sale to conclude that only very minor items of capital investment could be acquired by divisions without the head office formal approval [p.396].

The evidence offered by Scapens and Sale as to the degree of divisional autonomy in the capital investment decision is based on the features of the formal procedures in operation in the companies surveyed. However, some literature has suggested that the divisional involvement in the capital investment decision is much deeper than one could be led to infer from the formal procedures administered in practice. Implied in this assertion is the existence of an informal mechanism which is supposed to be present in the process leading to the capital budgeting approval [e.g. Bower, 1972; King, 1975]. In effect, it is argued that headquarters managers are limited in their capacity to assess divisional proposals thoroughly, and as a consequence they do no more than proposing minor changes. Reflecting on this point, Emmanuel and Otley [1976, p.45] stated that:

"Perhaps of greatest importance in deciding who makes the expenditure decision is an acknowledgement of limited human information processing capacity which forms the rationale of setting up divisionalised companies. The ultimate decision to accept or reject a capital project rests with corporate management, but their awareness of the possible multitude of sub-decisions which have taken place and from which the final data is derived is limited. In practice, one would suspect that investment decisions may be effectively taken at a level close to where the project originates, which is typically within the division."

Information on the informal aspects of capital budgeting selection and approval is not abundant. Studies by Morgan and Luck [1973] and Scapens and Sale [1981] suggest, however, that once a project reaches the stage of formal application for approval by the head office the likelihood of rejection is very small. Furthermore, these studies observed that in the few cases in which the proposed projects were not authorized, the reason was that insufficient information had been submitted. However, the proposals were generally referred back to the respective divisions, rather than immediately rejected.

These findings regarding the informal aspects of the capital investment process in divisionalized companies appear to demonstrate that, in general, division executives are able to exert influence upon capital expenditure. The implications of this conclusion for the RI debate are very significant, since much of the controversy was originated from differing interpretations about the degree of control exercised by divisional managers over the divisions capital base. Indeed Solomons [1965], whose advocating of RI as a measure of divisional performance generated such a debate, had based the logic of his argument precisely in this capability of division managers to influence a division's capital base. In fact, Solomons' theory implied a situation where the head of a division had the actual power to make investment decisions. Besides, in the particular case where a division manager did not have the right to give formal approval to capital expenditure above a certain limit, it was assumed that the managers would have, at least, the power to persuade top management to give the approval.

According to Solomons [ibid., p.155]:

"Full division autonomy implies, among other things, the right to exercise substantial influence on the scale of the division's operations. It also implies the right to determine the optimum scale of operations, and to be provided with the capital necessary to achieve that scale so long as the cost of the capital can be met."

For this reason, it is assumed throughout Solomons' analysis that:

"[The division general manager] has the power to determine the amount of capital to be invested in his venture. In practice, in divisionalized companies, a division general manager has only limited power to expand investment since approval of higher authority is needed for capital expenditures above a given limit. But the important thing is that the division general manager has the power to ask for capital." [ibid., p.64]

Had this assumption in Solomons' argument been noted much of the controversy originated would have been avoided.

In summary, the discussion in the present section demonstrated a remarkable lack of agreement in the academic literature as to the conceptual validity of RI as a measure of divisional performance. Attempts to reconcile the conflicting perspectives were made by a number of authors. Such attempts were successful in showing that the RI controversy was circumscribed to those situations in which division managers had some degree of freedom in determining the amount of investment (either in current or fixed assets) at their disposal. On the other hand, a general agreement in the literature was found for the cases where the investment base was fixed at corporate level, without any intervention from the divisions. In these cases, the interest element was generally considered irrelevant. Beyond the recognition of these areas of convergence, the effort made by authors in reconciling the different approaches was largely unfruitful. The reason for this stems from the fact that divergent basic assumptions were made by the authors when developing their arguments. These assumptions were generally related to two aspects, namely the capability of divisions to use external sources of finance for their working capital requirements, and the degree of divisional autonomy in determining the divisions' capital asset base. Empirical evidence

provided on companies' practices regarding these two aspects were to put the debate on the validity of RI in context, insofar as it offered a positivist dimension to a highly normative approach, and rendered some of the arguments put forward by authors redundant.

Having discussed so far the major features of ROI and RI at a conceptual level, the advantages and limitations of both measures as experienced in practice will be reviewed next.

5.2.4. Practical Advantages and Limitations of ROI and RI

Despite the controversy over the conceptual validity of RI this indicator of divisional performance gained acceptance among the accounting academic community and as a result has been included in most management accounting textbooks. It was seen earlier, however, that RI has not been well accepted in practice, judging by the limited proportion of companies that have adopted the measure. In contrast, ROI although perhaps not so popular among academics has enjoyed the most widespread use among corporations. At this point of the discussion it seems pertinent to enquire about the reasons for such a discrepancy, for which the comparative advantages and disadvantages of pragmatic nature of both methods will be pondered.

The advantages of ROI as a method of assessment of divisional operating performance are many, giving the method a special appeal when used in practice. Besides being a straightforward concept, ROI provides information that makes possible an immediate comparison with the return of alternative uses of capital in the market. Other advantages of using the rate of return measure can be found in the literature. For example, ROI is said to be a single comprehensive figure which reflects all the events influencing the financial position of an organizational unit [Dearden, 1969]. It is also seen to provide a common denominator that can be used to make comparisons with organizational units (e.g. comparisons among division of a same firm, comparisons between a particular division of a corporation and another company, etc.) [ibid.]. In addition, ROI is viewed as an

adequate method to be set as a goal of corporate performance, providing a dual base for planning and control of divisional operations [Gorelik, 1971]. Finally, by giving an indication of the efficiency with which capital is being utilized by unit management, ROI is said to motivate management to focus on the particular relationships between profit and capital [ibid.].

Despite its strengths, ROI presents serious weaknesses. A vast literature has focused on the practical limitations of ROI, emphasizing the potential dysfunctional consequences that can arise from its indiscriminate application to divisional performance evaluation. Henderson and Dearden [1966, p.144], taking a very radical view against ROI pointed out:

"... we want to challenge the prevailing view. It is our conviction that ROI for divisional performance evaluation can be so misleading that it is destructive. It provides information that logically leads to incorrect decisions. It motivates division managers to take actions contrary to the best interests of the company. And it provides top management with misleading information about divisional performance."

The discussion of the limitations of ROI can be approached from two distinct perspectives that are closely interrelated. One concerns the motivational aspects of ROI. The other relates to the technical characteristics of the method.

The problem of misdirected motivation of division managers caused by subunit performance evaluation systems based on ROI arises in those situations where the judgement on the competence of managers is directly influenced by the results obtained by their divisions. In essence, as long as the success of a division's manager is identified with a certain ROI figure, the manager will be motivated to take actions that in spite of optimizing the return on the capital of his division may be harmful for the company as a whole. Many of the dysfunctional decisions taken by divisional management are only possible due to the high management turnover in posts of top responsibility in divisions. To obtain promotion, managers are encouraged to improve their divisions' short term rates of return at the expense of long term profitability. If they have a certain degree

of independence and authority they can easily produce a better ROI by such actions as reducing inventories, failing to replace ageing equipment, lowering advertising expenditures, reducing research and development, and cutting down on training programmes. This represents a major shortcoming of ROI, generally referred to as **"cultivation of short-range thinking"** [Steiner, 1969, p.382].

In addition to these difficulties, ROI also has drawbacks of a technical nature which under certain circumstances may produce misleading information. A major technical problem of ROI is related to the measurement of the amount of capital employed in a division. If in the computation of ROI fixed assets are valued at gross book value there will be a very strong incentive to scrap equipment as long as the contribution made by an asset divided by its gross book value gives a rate of return lower than the ROI currently earned by the whole division. Also in the cases where equipment is idle the incentive to scrap is high, even when the equipment still maintains its full productive capabilities and the need for its use is foreseen at a medium or long term. In cases such as these, an immediate improvement in the ROI figure is produced, although with possible harmful effects for the company as a whole or for the division itself. In effect, when scrapped equipment is not replaced, prospective sales growth and future scale economies are impeded. On the other hand, when productive, though old, assets are scrapped and replaced by brand new and slightly more efficient equipment this may cause an unnecessary dissipation of scarce financial resources that could be alternatively employed elsewhere in the company, and yield a better marginal return.

If in the computation of ROI fixed assets are alternatively valued at net book value problems may arise when assets accumulate high levels of depreciation. The smaller the value of the capital employed in a division the higher is the division's ROI for the same amount of profit. Thus, when the division's fixed assets are fully, or near fully, depreciated there exists a strong incentive for postponing the replacement of equipment even when the equipment is obsolete. In these cases, divisions would simply accept stagnation observing their rates of return improving automatically with time [Dearden, 1960].

Most of the problems just described result from the fact that there is often very little relation between accounting values, on which ROI assets are based, and current economic values. In effect, in determining ROI fixed assets should reflect the true economic usefulness of the assets, and this depends on the market and the technology, among other factors, and not on the original purchase prices [Dearden, 1969]. An approximation, however rough, to such economic values can be provided by replacement costs when these are used to determine the value of the divisional fixed assets.

The determination of the amount of capital employed in a division is not limited to the valuation of fixed assets. Also the divisions' current assets make part of their total asset base for purposes of ROI performance evaluation⁽³⁾. Dysfunctional consequences may arise by ignoring liabilities in the investment base as Dearden [1961] explains in detail. Additionally, difficulties are likely to be created by the fact that the current asset items are generally included in the investment base at end of period static values [ibid.].

Like the calculation of the amount of capital (both fixed and current) employed in a division, also the determination of net income - the other main element of ROI - may cause difficulties to divisional performance evaluation. The examination of the theory and practice behind income determination is not within the scope of this study. It must be emphasized, however, that some of the faults attributed to ROI stem from the way in which profit is measured [e.g. Henderson and Dearden, 1966; Horngren, 1982, ch.20]. The profit notion is inevitably linked to a period of one year, and this is often not long enough to allow a meaningful assessment. Consequently, the literature has proposed longer evaluation cycles that are in the base of the concept of time-span evaluation [Dearden, 1968]. Problems such as these which derive from the way in which income is determined are not exclusive of ROI, rather being present in all the profit-based measures employed in divisional performance evaluation.

Having discussed many of the practical consequences arising from the use of ROI in performance evaluation, a comparison with the other classic measure of divisional performance is now pertinent. On the advantages side, ROI avoids the problems normally created when a division presents a high return on the capital employed. When divisional managers seek to maximize RI, they are willing to invest even in those projects whose expected return is lower than the ROI earned by the division. In fact, RI will be increased as long as the profit yielded by any additional investment is higher than the cost of capital charged to the division. Another advantage of RI is its flexibility, which enables the capital rates to be changed from period to period in accordance with the corporate capital investment policies. RI also facilitates the utilization in practice of different capital charges for different types of assets [Dearden, 1969; Gee, 1973].

As regards the limitations of the RI method, one major difficulty arises with the determination of the cost of capital as it was seen earlier in the chapter. This element of the RI measure represents an opportunity cost and as such the computation of its value in practice is rather problematic. Another weakness is that RI does not provide a common basis on which comparisons among different subunits can be made. Finally, RI also presents some of the shortcomings attributed to ROI. Fixed and current assets, as well as net income must still be determined before RI can be calculated. And the determination of such values still pose problems and difficulties, as explained when discussing ROI.

In general, RI avoids some of the dysfunctional consequences that are incurred with the use of ROI. However, its application in practice is not without difficulties. Perhaps this is the reason why its acceptance among companies has not been as widespread as one could be led to infer from the support for the measure found in the literature. Authors such as Gee [1973] and Reece and Cool [1978], recognising the practical shortcomings of RI but not denying its conceptual strengths, stressed that until a better measure of performance is discovered ROI "is still best". They advocate that to avoid many of the ROI dysfunctional consequences, both divisional divisional and head office

managers should be familiar with the potential ROI pitfalls. As Gee [1973, p.15] notes:

"The widespread use of return on capital employed reflects not so much inertia as a feeling that it will be until something better turns up. This has not yet happened. The search for improved performance measures must continue; but in the meantime a knowledge of the limitations of what we now have can prevent many wrong decisions and a great deal of needless friction."

The limitations of the two classic measures of divisional performance - ROI and RI - render any evaluation process solely based on either of the measures highly likely to be unsuccessful. In order to overcome this problem other methods of divisional performance evaluation may be used by corporations. Indeed, the assessment of divisions and their managers is best conducted if based on a battery of different indicators of performance, instead of concentrating on one sole measure. The following sections will introduce a number of such indicators, that can successfully complement ROI and RI.

5.3. The Budget as an Integrated Instrument of Divisional Performance Evaluation

5.3.1. The Multiple Roles of the Budget

Budgeting systems can be found in virtually every company of any size. However, organizations can use budgets for different purposes and in only a proportion of cases are budgets systematically employed in divisional performance evaluation. Surveys of company practices have revealed that the use of budgets as a method of assessment of managerial and subunit performance is widespread. For example, Scapens and Sale [1981, 1985] found in their recent survey that nearly half of the companies studied (44 percent in the U.K., and 49 percent in the U.S.) were using the budget as an integrated instrument of

divisional performance evaluation. The budget was found to be the second measure most widely used in the U.S. (ROI being the first), and the third in the U.K. (after profit before interest and taxes, and ROI).

Different ways of understanding the budgeting system in organizations are found in the literature. The traditional approach views the budget as a device in which the superiors can exercise their planning and control activities over the subordinates. Alternatively, more modern approaches view the budget as serving a complex of multiple functions, namely: 1) a formal authorization procedure; 2) a means of forecasting and planning; 3) a channel of communication and co-ordination; 4) a motivational device; and 5) an instrument of performance evaluation and control [Emmanuel and Otley, 1985, p.110]. Frequently, authors recognize the multi-functional role of the budget but emphasize only one of the functions. For example, Ronen [1975] stresses "motivation" as a main role to be performed by the superior via budget use. Lowe and Shaw [1968] and Livingstone [1975] favour the resource allocation process inside the organization and view the budget as an internal market by which resources are committed within the firm, and as a device in which overall goal statements of broad nature are converted into operational and more specific subgoals. For Cyert and March [1963, ch.3], the budget is a dominant "natural-control system" used by organizational members to enforce their agreements through which conflicting views are accommodated. Via the budget, a set of fixed commitments and fixed expectations are explicitly defined in advance by the members of coalitions. According to this view the budget is an important stabilizing and integrative device since it provides a mechanism for enforcing the agreements reached within the coalition, so reducing the potential for conflict.

The performance evaluation and control function of the budget will be the focus of the present section. A major advantage of the budgeting system as an integrated instrument of performance evaluation and control is that it enables a comparison at a detailed level of disaggregation between actual and forecasted components of the final profit figure. This characteristic facilitates the use of the budget in the assessment not only of output performance (the "what" in

performance), but also of behaviour performance (the "how"). Consequently, the budget can be appropriately utilized as an indicator of both subunit performance and managerial performance, provided the necessary adjustments are made. In effect, the use of budget information leads far beyond the bottom line figure and provides information that can adequately be employed in assessing how good managers were in administering corporate resources.

Furthermore, budgeting data are endowed with intrinsic characteristics that allow to distinguish between effectiveness and efficiency when setting standards of performance. As Otley [1978, p.124] points out:

"[The budget] represents a standard of effectiveness insofar as it specifies a set of desired outputs and a standard of efficiency to the extent that it details the inputs deemed necessary to produce the specified outputs."

5.3.2. Managerial Uses of Budgeting Information for Performance Evaluation

The way in which top management makes use of budgetary information in the assessment of divisional performance has strong implications for the success of the budget as a performance evaluation criterion. Two aspects will be considered next. One has to do with the attitudes taken by superiors towards the budgetary standards, which also includes the degree of enforcement placed on the achievement of such standards. The other aspect concerns the emphasis put by head office management on the deviations between actual and budgeted results obtained by divisions. Just how top managers enforce the standards assigned to divisions and how they react to under-achievement of objectives may be reflected by the severity of the decisions resulting from the appraisal.

Attitudes towards the budgetary standards

Generally, there are two opposite attitudes towards the budgeted results set as performance standards [Bursk et al., 1971, ch.2]. One consists in regarding the budget as a forecast, which in the strictest sense is simply a prediction of what is expected to happen, being assumed that the forecaster has no influence over the results. The other attitude consists in looking at the budget as a management commitment in which it is assumed that division managers have the ability to make the predictions to materialize. Forecast and commitment co-exist in different relative degrees in the budgeting systems found across companies.

Difficulties arising in the performance evaluation process from the use of the budget appear to be due to the failure in recognizing the differences between forecasts and commitments [ibid.]. If budgets are used by headquarters as simple forecasts an accurate anticipation of future events is sought, and the forecaster (i.e. the division manager) should be evaluated on how close his prediction came to actual. On the other hand, if budgets are understood as a divisional management commitment, the estimated values agreed upon are regarded as satisfactory levels of performance that divisions are expected to attain or exceed. In this case, the more the division managers can show actual values in excess of the forecasted ones, the better their performance is likely to be considered by superiors. There can be, therefore, a direct conflict between two of the basic functions attributed to the budget, i.e. planning and control, since these functions involve respectively, forecasts of future activity and measurements of actual performance (commitments). Accordingly, in those cases where the same budgeting system is utilized simultaneously for both planning and evaluation purposes, and where the budget standards are enforced and predominantly understood as divisional management commitments, the estimates of future activity relevant to planning will tend to stay behind the results the divisions can really achieve. As the distribution of rewards is usually related to the results of the evaluation process, divisional management behaviour tends to be oriented in a way in which those rewards that are

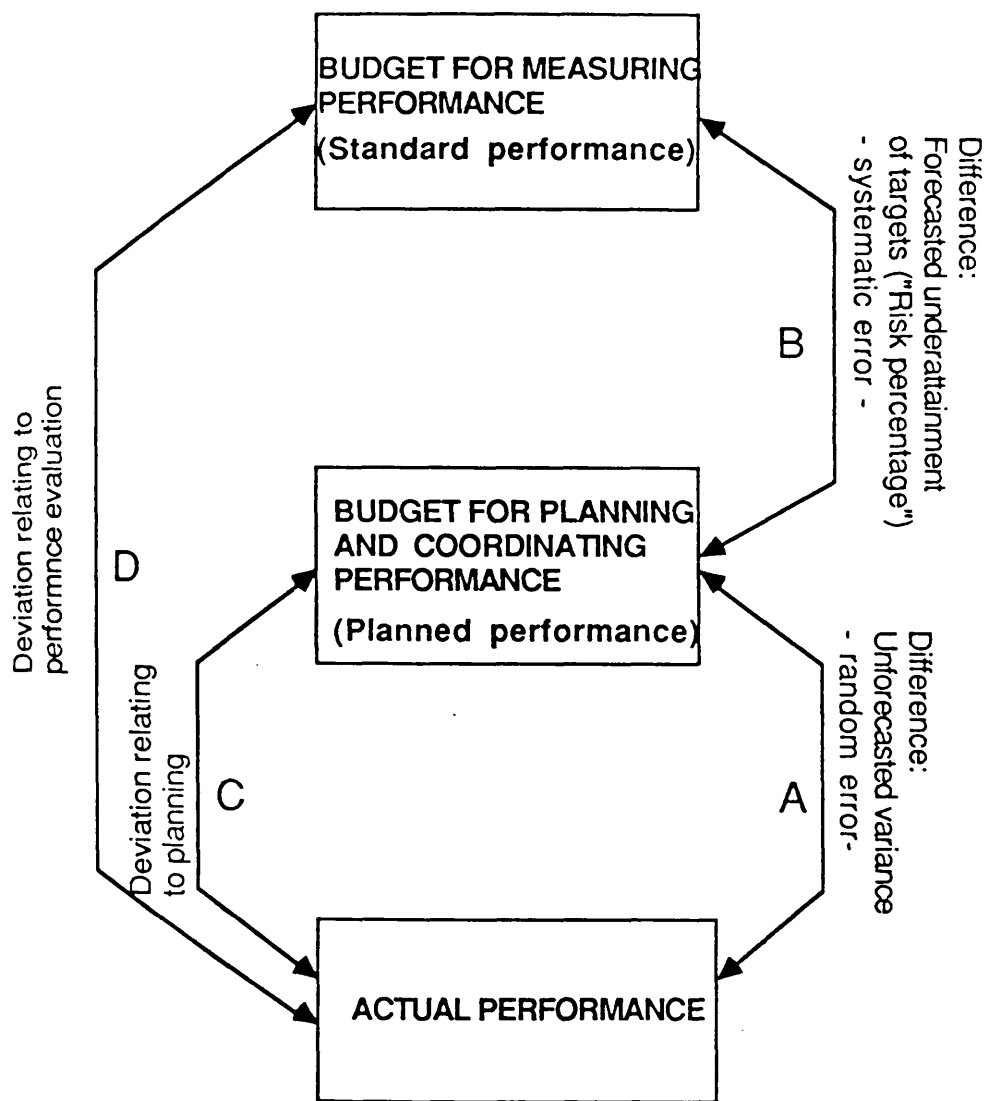
considered desirable by the division manager can be reached. This will lead the manager deliberately to underestimate future activity [Hopwood, 1972], and to consciously build organizational slack into the budget⁽⁴⁾ [Schiff and Lewin, 1968]. Hence, no satisfactory data for planning purposes are likely to be obtained in such cases.

On their turn, top executives being aware of these reactions on the part of division managers will try to counteract the sub-optimization built into the predictions made for divisions. This constitutes, in essence, the rationale for the negotiation and bargaining that often take place before a budget is approved. The process of preparation of proposals, their acceptance or rejection, and the subsequent revision of the proposals is widely known and well documented in the literature [e.g. Hofstede, 1968; Shillinglaw, 1972]. Also, behavioural scientists following the pioneering works in the fifties of Argyris [1952] and Stedry [1959] have studied the nature of the bargaining process originated by the budgeting system, and have attempted to understand the changes induced in the organizational participants' attitudes and behaviour by the necessity to comply with budget standards [Mattessich, 1980]. (For a comprehensive review of the literature with important insights into the psychological field, see Tosi [1975]).

In general, whatever agreement is reached between top and divisional management on the setting of budgetary standards of performance, the budgeted figures will reflect the bargaining expertise of the participants and most likely will differ from the predictions that would be made if no commitment was attached to the forecasts. In this sense, Hofstede [1968, ch.2] distinguishes between **"budgets for measuring performance"** (i.e. budgets used as standards for managerial performance evaluation), and **"budgets for planning or coordinating performance"** (i.e. budgets employed as devices for coordinating resources and anticipating managerial performance). Hofstede calls for a clear separation in practice of these two concepts and advocates the creation of two distinct types of budgets.

Exhibit 5.I illustrates the differences between standard, planned, and actual performance which are on the basis of a system where the two

Exhibit 5. I - Variances Between Budgeted Performance and Actual Performance



Source: Adapted from Hofstede [1968, p.24]

types of budgets are kept separate. According to this system, planned performance must correspond to actual expectations and is intended to show as close to actual performance as possible. Plans include not only forecasted elements upon which the corporation has little or no control (e.g. general economic level, inflation rates), but also a guided coordination of actions and decisions to allocate resources with the purpose of fulfilling pre-set general business strategies and particular policies. Any deviation between what was planned and what came to be the actual - A in exhibit 5.I - should only be due to unforecasted and uncontrolled factors. On the other hand, standard performance (see exhibit 5.I) is the outcome of a political and bargaining process where the contending parts exercise their negotiation skills and personal influence and power. The deviation between this and the planned budgeted performance - B in exhibit 5.I - involves a forecasted underattainment of targets, which contrasts with the unforecasted variance A. By distinguishing these two levels of budgeted performance it is then possible to separate between a deviation that concerns only planning (C in the exhibit), and a deviation that relates exclusively to performance evaluation (D in the exhibit). According to Hofstede [ibid] the difference between standard and planned performance can sometimes be forecasted. It is assumed in his model that an underattainment of the performance standards is to be expected. And it is ascertained that in some cases it is possible to forecast a "risk percentage" which, when applied to standard performance, gives a closer estimate to actual performance. From this results a new estimate that can be used for planning purposes in those companies where standard performance and planned performance are not differentiated. As Hofstede [ibid., p.24] explains:

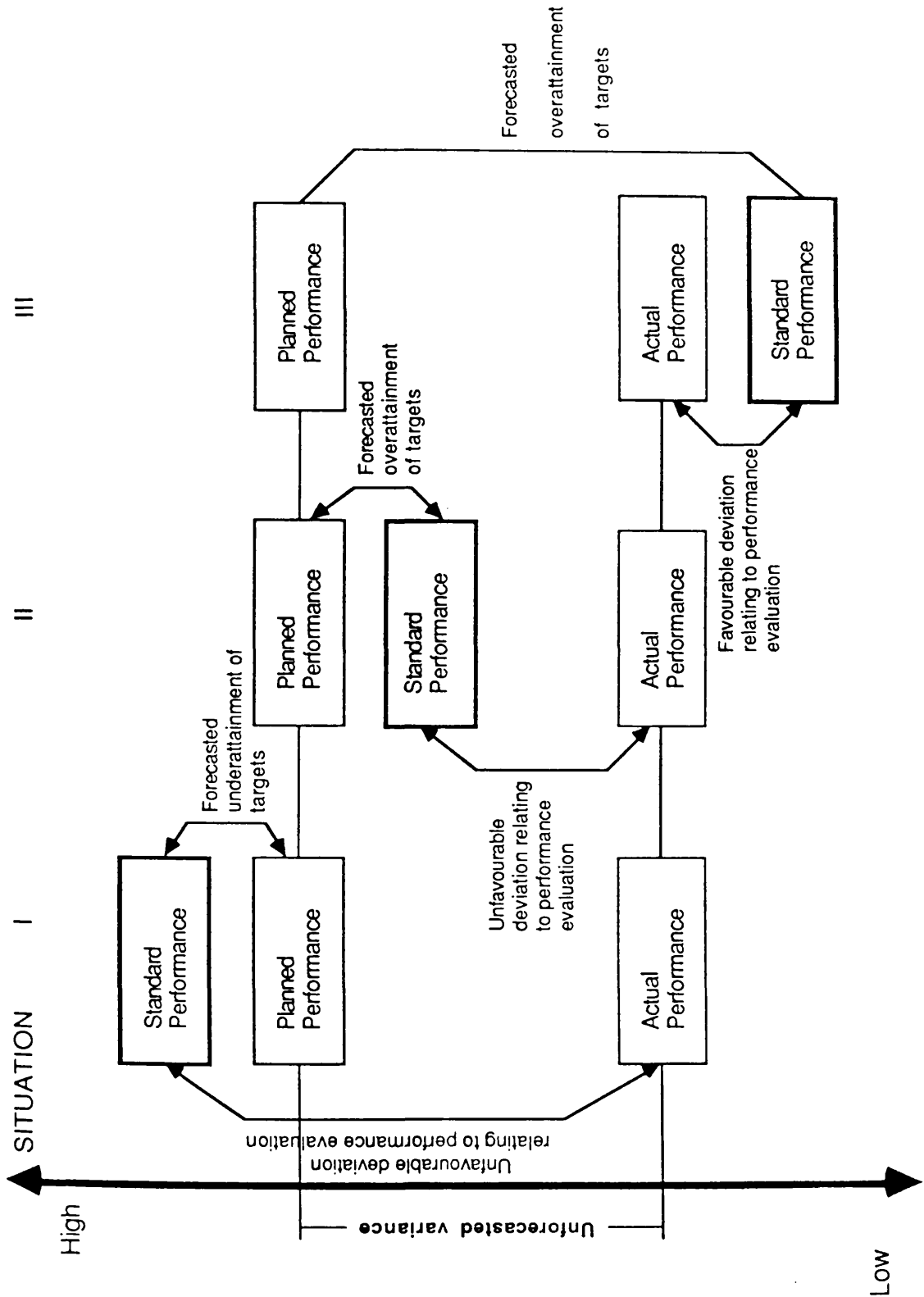
"Budgets serving as standards for performance will obviously not always be attained. Not only a lack of effort of the person measured, but also external disturbances may lead to an underattainment of goals. The average risk of such an underattainment can sometimes be forecasted, so that the performance that is actually expected differs from standard performance. Planning, however, must be based on actual expectations. Therefore, when an underattainment of goals can be expected, the same budget cannot be used for measuring and planning purposes. The difference must be resolved by adding a risk percentage to the standard performance."

The Hofstede model can be extended to a wider range of situations if the premise of underattainment of standard performance vis-a-vis planned performance is dropped. In reality, the positioning of the estimates for performance measuring (standard performance) in relation to the estimates for planning (planned performance) can vary widely, both in theory and in practice, and include also situations where an overattainment of performance standards is expected. In fact, the setting of budgets as performance standards is mainly a behavioural phenomenon, and as such a difference, either in excess or by defect, is bound to exist in relation to the budgets that would be set for sole purposes of planning and coordination.

Exhibit 5.II depicts three possible situations. In situation I the standard performance for a division of a particular firm was set at a higher level of results than the planned performance. From this it follows that the required targets for performance evaluation are expected to be underattained. In addition, and because planned performance will be underachieved (the exhibit shows for the three situations actual performance coming to be lower than planned performance) an unfavourable deviation relating to performance evaluation will be encountered. On the other hand, in situation II standard performance is set lower than planned performance, which means that the results demanded for the division are less than the results really expected to be obtained. Here, the required targets for performance evaluation are anticipated to be overattained. However, due to the underachievement of planned performance an unfavourable deviation relating to performance evaluation will be obtained. Finally, in situation III standard performance is also set at a lower level than planned performance. However, the difference between the two is so high here that a favourable deviation relating to performance evaluation will be obtained, even having planned performance been actually underachieved (see exhibit 5.II).

If no distinction was made between budgets for measuring performance and budgets for planning and coordinating performance - the latter being simply assumed to be the same as the former - the planned performance would not be set at the same level in situations I, II and III. Rather, planned performance would accompany the fluctuations in

Exhibit 5.II - Interpretation of Budget Deviations for Different Situations of Forecasted Attainment of Targets



5 / SUCCESS INDICATORS OF DIVISIONAL OPERATING PERFORMANCE

standard performance in accordance with the outcomes of the negotiations that take place in the setting of standards for performance evaluation. As a consequence, the budget would not provide an adequate basis for corporate planning and, more important for the present study, the budget would not be appropriate for divisional performance evaluation, as situation III in exhibit 5.II clearly demonstrates. The lesson from this appears to be that for those companies which use only one budget for planning and control purposes, the standards employed for the evaluation of performance should always be as close as possible to the targets that would have been set, had a budget been built as a forecast instrument without any commitment attached to it.

Emphasis placed on budgetary deviations

Differing emphases put by superiors on deviations between actual and budgeted results obtained by organizational subunits have been suggested to impact differently on the divisional performance evaluation process. In a study conducted by Hopwood [1972] important facets of human behaviour were explored in a performance evaluation context where budgetary deviations were the dominant managerial assessment criterion. Distinct ways of using accounting data in the evaluation of performance were defined, and three styles of evaluation were identified: 1) the budget-constrained style, where a heavy emphasis is attached to meeting or exceeding the budget; 2) the profit-conscious style, where the meeting of the budget is not so crucial and where the superior, being aware of the shortcomings of budgetary information, supplements deviations with other performance indicators; and 3) the nonaccounting style, where the evaluation of performance is not primarily based on accounting data.

The effects of each of these styles of evaluation on the division managers' attitudes towards their job (i.e. relations with superiors and peers, job related tension, engagement in dysfunctional decision making) were then studied. Hopwood's results revealed that the budget-constrained style was associated with the subordinate's belief that the evaluation was unjust, and with higher levels of tension on

the job than the two other styles. Also, the budget-constrained style was found to result in feelings of distrust towards the superior, in less favourable relations of the subordinate with peers, and in a higher likelihood of division managers to manipulate accounting data with the purpose of improving their reported performance [ibid., pp.166-172]. From such results one would conclude that when the assessment of an organizational subunit is exclusively based on the budgetary deviations, more dysfunctional behaviour on the part of subunit managers is likely to occur, compared with assessments that complement deviations with other performance indicators.

Using a similar approach and methodology, Otley [1978] extended Hopwood's [1972] hypotheses and designed a study in which factors influencing participants' behaviour that were not related to the use of budgetary deviations could be controlled. The study attempted to focus on subunits with identical products and similar physical and environmental characteristics, in order that it could isolate as far as possible the effects on behaviour of alternative styles of budgetary use.

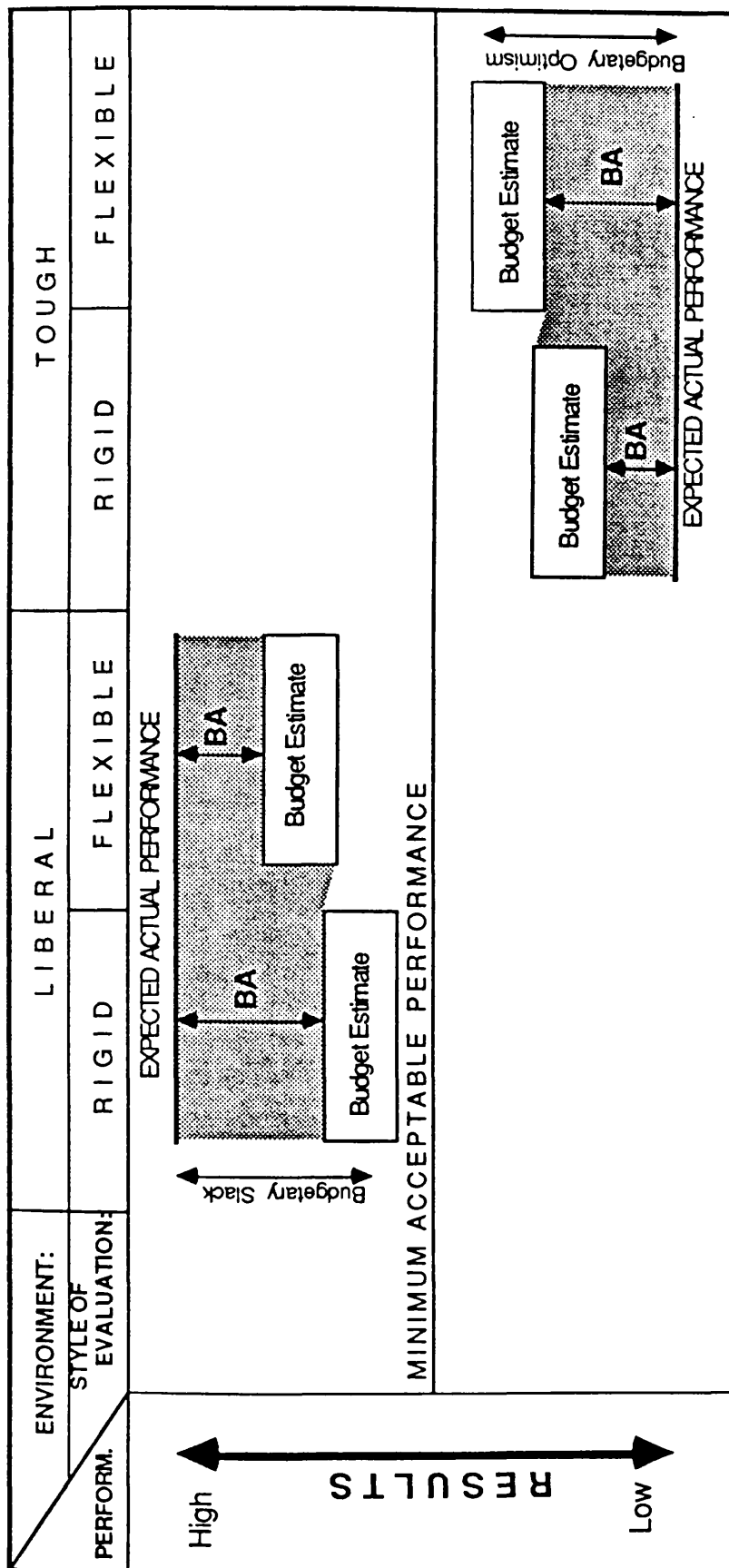
The results of the Otley study did not give support to the previous Hopwood's findings, for, contrary to what had been hypothesized by Otley, the style of budget use was not found to affect job-related or budget-related tension, nor a budget-oriented style of evaluation was found to decrease job ambiguity or ambiguity of evaluation. The evidence gathered suggested that job-related tension was inversely associated with the degree of agreement a unit manager had with the way in which budgets were set or his performance was evaluated by superiors, rather than being invariably associated with any specific style [ibid., pp.130-132]. A noteworthy finding in Otley's study was that budgets tended to be more closely met when a heavy emphasis was placed by superiors on budgetary measures of performance. However, Otley asks whether the apparent improvement of performance under the budget-constrained style of evaluation is real or whether it is caused only by manipulation of the budgetary standards, or even by manipulation of the results reported. The analysis tended to show that when evaluation stressed budget deviations actual performance came closer to the budget not so much because performance improved but

because the budgetary standards were set at more realistic levels [ibid., pp.138-139].

In this and subsequent articles, Otley [1978, 1979, and 1980] introduced a new dimension to the relationship between the use style of budgetary information and budget accuracy (i.e. how close actual performance comes to the budget). Such a new dimension involved the consideration of the nature of the environment surrounding the organizational subunits being evaluated. Basically, the environment external to a subunit was characterized as either liberal, when favourable business conditions lead to expected actual performance being higher than the minimum acceptable performance, or tough, when unfavourable conditions lead to expected performance falling below the minimum acceptable performance. A model involving type of environment, style of evaluation, and budget accuracy is presented in exhibit 5.III. Here, when the environment is liberal it is assumed, following the findings of Lowe and Shaw [1968], that slack is introduced in the budget estimates. On the other hand, when the environment is tough it is assumed that budget estimates are optimistic. Furthermore, it is assumed that a rigid style of evaluation (mainly budget-constrained) leads to budget estimates to be set at lower levels of performance than a more flexible style of evaluation (mainly profit-conscious). As it is observed in exhibit 5.III, while in a liberal environment the most accurate budget estimate takes place under a flexible style of evaluation, in a tough environment the most accurate estimate occurs under a rigid style. As Otley [1978, p.145] concludes, if budget accuracy is considered to be a desirable feature of the budgetary systems implemented, **"a different style of budget use is called for, contingent upon the nature of the operating environment."**

A wider perspective of the effects on the divisional evaluation process from a differing emphasis placed on the budget and other accounting-based measures was sought by Hirst [1981]. He argues that in situations of low task uncertainty, where the means of achieving required performance are well understood, a relatively high emphasis on accounting performance measures tends to reduce dysfunctional behaviour. In contrast, when task uncertainty is high the reduction

Exhibit 5.III - Degrees of Budget Accuracy Under Different Styles of Evaluation and Types of Environment



Source: Adapted from Otley [1978, p.144]

BA - Budget Accuracy is higher when: 1) in a liberal environment a flexible style of evaluation is used; 2) in a tough environment a rigid style of evaluation is used

(NOTE: It is assumed that actual performance comes to be equal to expected performance)

of dysfunctional behaviour tends to be achieved with a relatively low emphasis on accounting measures.

In summary, it is suggested from the evidence available that the degree of emphasis placed by superiors on budgetary deviations, together with the nature of the information used, have an impact on the subordinates' behaviour as regards their approach towards the budget in particular, and the overall performance evaluation process in general. The links between style of evaluation and subordinate behaviour are difficult to comprehend in all their magnitude, and the studies reviewed managed only to scratch the surface. However, as Emmanuel and Otley [1985, ch.6] remark such studies clearly demonstrated that the motivational impact of budgeting information is somehow critically influenced by the way in which the budget is used by superiors and the extrinsic rewards that are made dependent on budget achievement.

5.4. Non-Financial and Qualitative Measures of Divisional Performance

So far the discussion about the success indicators of divisional operating performance has centred solely on financial measures of performance. In this section non-financial indicators, both of a quantitative and qualitative nature, will be analysed.

5.4.1. Why Using Non-Financial and Qualitative Success Indicators?

The implications of the use of financial measures of performance, and especially profit-based indicators such as ROI and RI, for the divisional performance evaluation process have been extensively discussed in the previous sections of the present chapter. It was emphasized there that a narrowly focused attention on periodic profit

reports from divisions would most likely lead to dysfunctional behaviour on the part of divisional management who would give preference to short term profits at the expense of long term results. A number of actions which would produce such an effect were described. These include the lowering of capital investment, as well as the reduction of intangible investments in areas such as R&D, employee training, maintenance, quality control, and customer service. Moreover, in chapter 4 when problems in performance evaluation and control were discussed (see section 4.3.3.) major weaknesses inherent to accounting information were demonstrated to cause serious limitations to an effective performance appraisal.

Emphasis on profit and other financial measures of performance probably derives from the ultimate purpose of the business enterprise of maximization of the shareholders' wealth. However, the monitoring of an organizational subunit in order to achieve that ultimate objective should encompass the regular assessment of a number of indicators, many of which, not being directly related to financial performance, will measure attributes that have a significant impact on the bottom line. Likert [1967, ch.8] calls attention for the importance of non-financial indicators of performance, and reasons that these should always co-exist with the traditional profit measures, constituting important current sub-goals which will influence future long run profits. Similar positions are defended by authors such as Caplan [1971], Scott [1972], Fantl [1975], Rappaport [1978], Parker [1979], and Kaplan [1982, 1983], just to mention a few.

An explanation for the management concentration on the short term rather than on the more important long term, on which the survival of a company will be decided, was attempted by Rappaport [1978]. According to him, the way in which executive compensation is awarded is the main responsible for such a focus on the short term and on profits. Executive compensation is observed to be directly linked with the results normally disclosed to external investors, notably absolute profit, ROI, and earnings per share [ibid., p.83]. It is known that the stock market favours the maintenance of quarter-to-quarter or annual earnings growth, and this leads managers to concentrate on short term results, and sometimes overlook the long

term. It could be argued that short term results are strongly influenced by long term thinking in the sense that today's performance is partly the result of decisions made in the past and that only now bear their fruits. This being so, managers would not be allowed to overlook the long term since they would be jeopardizing future performance. Despite the logic of this argument, the fact is that in practice managers usually stay in a given position for a period of time that is not long enough for the consequences of their long term decisions to be felt while they still hold that position. As a consequence, they will tend to privilege those decisions that will enhance their subunits' performance on the short term even when such decisions are not beneficial on the long term. As Rappaport [ibid., p.83] explains:

"In light of [the given] incentives and the fact that the division executive usually remains in his or her position for only three to five years, he is compelled to concentrate on short-run results and adopt policies that may discourage growth and acceptance of reasonable risk. The ambitious person expecting a promotion in the next two or three years may abide by two guidelines for decisions concerning discretionary outlays of development funds: the risk must be low, and the project should yield a significant portion of its return in the next two or three years."

One way of assuring that managerial decisions safeguard the company's best interests in the long term involves the implementation of a performance evaluation system which encompasses three main approaches [ibid., p.85]. First, executive incentives should be closely tied to long range plans. This would require the utilization of performance indicators to periodically gauge the achievement of strategic, non-financial goals such as market share, product quality, product development, productivity and personnel development. Second, management compensation should be related to extended time periods, involving several years rather than just one year. Finally, if financial measures are to be used, the performance evaluation system should utilize indicators that do not penalize managers for taking decisions that favour long term profitability at the expense of short term results.

As Kaplan [1983, p.699] points out, a serious objection to a performance evaluation system such as this is that the short term financial performance of the firm will appear more erratic and unpredictable, to the disliking of many investors and securities analysts. However, at the end of the day it is the stock market price that will reflect the success of management. Different beliefs as to how such price is determined may influence management behaviour and their choice of a performance evaluation system, as Rappaport [1978, p.84] notes. In effect, if top executives believe that stock prices are based mainly on profit and earnings per share, they are likely to demand from subordinates the achievement of targets measured in profit terms and covering short periods. On the other hand, if top managers believe that stock prices reflect not only the company's currently reported earnings but also the expected future returns of R&D and capital expenditures, and indeed all publicly available information relevant to the company's future activities, in line with the concept of "market efficiency" [e.g. Van Horne, 1983, ch.3], then they are more likely to emphasize long term performance evaluation and to use strategic, non-financial, success indicators.

Another justification for complementing financial measures with non-financial indicators in divisional performance evaluation stems from the problems that arise with the concentration on a scarce number of success indicators. Caplan [1971, pp.103-108] warns that single criterion measures such as ROI overemphasize that sole factor and exclude other factors important to the overall success of the organization. Besides, it is argued that focusing on a single or a limited number of indicators leads to undue pressure on the divisional managers to concentrate upon an index instead of upon decisions that benefit the whole organization. Therefore, a battery of performance indicators covering a wide range of company facets, some of them having inevitably to be expressed in non-financial terms, is preferable to the over-reliance on a single measure. However, the use of an excessively large number of indicators may be counterproductive. As Leksell [1981] adverts, as the number of goals and their respective indicators increases, the likelihood of goal conflicts also increases (for example, demands for a high customer service involving speedy deliveries and repairs may conflict with requirements for low stock

levels). It is easy to conceive the divisions of a company becoming confused about the head office expectations and preferences [ibid., p.224] if the performance evaluation criteria applied are not carefully balanced and their number reasonable.

Finally, the use of non-financial measures of performance becomes even more crucial in a MNC context. Previously, in section 4.3.3. a conclusion was reached that the achievement of a competent and effective performance evaluation and control system in a MNC encompasses the consideration of the environmental specificity of each individual subsidiary. The taking into account of such a specificity in the evaluation process, a necessary condition for the proper application of the principle of authority and controllability, is facilitated by the use of non-financial and qualitative performance indicators. In effect, non-financial measures in general, and qualitative information in particular, are local, situation-specific in nature [AAA, 1971], and so offer the potential for an adequate assessment to be made of each subsidiary individually, free from much of the influences of subsidiaries on one another that so readily show on profit measures. The inclusion of non-financial indicators in the performance evaluation process in MNCs appears to be a step towards a more capable evaluation system. Scott [1972], among others, defended the creation of a multidimensional performance evaluation system for foreign subsidiaries and their managers. As he pointed out:

"It seems clear that, unlike predecessor profit center systems which were largely unidimensional in that performance was evaluated primarily in terms of profit and return on investment, these new systems can be expected to be multidimensional." [ibid., p.65].

The extent of non-financial information used by MNCs in their internal evaluation systems will be reviewed next in chapter 6, on face of the empirical evidence available.

To summarize, there are many relevant reasons for the use of non-financial measures in performance evaluation. They arise primarily from the inherent weaknesses of accounting information which cannot capture the whole complexities of a business, let alone the MNC, and from the characteristics of the performance evaluation systems in

operation in companies. Non-financial success indicators like market share, productivity, success and level of R&D, personnel development and so forth are believed to give an indication of the long term health of a business. The continuous monitoring of these indicators gives managers a more thorough understanding of the units being evaluated and provides them with early warnings of potential problems which will reflect on future profits.

5.4.2. Which Non-Financial and Qualitative Success Indicators?

Having demonstrated the rationale for the use of non-financial success indicators in performance evaluation, the present sub-section will discuss which measures are appropriate for the achievement of an effective assessment of organizational subunits, and which basic characteristics these measures should possess.

In discussing the role to be fulfilled by non-financial and qualitative indicators of performance, it should be reminded again that performance measures are only surrogates for organizational objectives previously set. In effect, a measure of effectiveness is normally a gauge indicating the degree to which an objective is accomplished by a given alternative [AAA, 1971, p.169]. This being so, the adequacy of any given indicator included in a performance evaluation system is often the reflection of the adequacy of the organizational objective the indicator is attempting to measure.

Brennan [1976] defined three major requirements for a successful performance criterion by specifying the desirable characteristics of any organizational objective. These characteristics are relevance, reward, and measurability. According to Brennan [ibid., p.116] the objectives set to a business must be relevant to it, since a primary responsibility of an organization is **"to make contributions in areas where it is organized and competent to do so."** In addition, objectives must be linked directly to the reward system by which managers are compensated, in order that organizational effectiveness may be built around managerial accomplishment. Finally, objectives

must be measurable. However, measurability does not necessarily imply the property of being quantifiable, but only the capacity of being set finite targets and deadlines and progress being evaluated against these predetermined criteria [ibid.].

Taking a wider approach, Brinkerhoff and Kanter [1980] defined the success of a performance criterion as being linked to the existence of a number of conditions concerning both organizational objectives and the tasks necessary to perform in order to achieve those objectives. Such conditions are: 1) the purpose of the appraisal must be clear; 2) the objectives to attain must also be clear; 3) the outcomes should be predictable; 4) the tasks should be simple and relatively independent; and 5) the task performance should be observable [ibid., p.13].

Keeping in mind these general considerations about the requirements of a performance evaluation criterion, the list from which to choose non-financial indicators is almost endless. All possible dimensions of a business can be covered by such indicators. For purposes of convenience performance measures are usually associated with one of several major areas of performance. A classical classification considers six main domains of organizational effectiveness [AAA, 1971] namely productivity (or production effectiveness), marketing effectiveness, personnel and organizational effectiveness, financial effectiveness, effectiveness of internal communication, and the effectiveness of fulfilling the firm's social role. Many studies have covered one or several of these areas, having proposed a number of measures which on the whole amount to a hugely extensive and meaningless list of performance criteria⁽⁵⁾.

A more fruitful approach is the one which relates the instruments of evaluation with the varying key management aspects of each corporation. According to this approach non-financial measures of performance should be selected in function of the critical managerial tasks that arise in each point in time in any given business. As an illustration to this principle the particular case of the assessment of manufacturing performance will be discussed.

In the common instance of manufacturing organizations in which production plays an important overall strategic role (see for example Skinner [1969] for a demonstration of the importance of manufacturing to corporate strategy), the evaluation of the performance of this important area of corporate activity is critical. Hayes and Wheelwright [1979a, 1979b] showed that the manufacturing process of a product changes as the product progresses in its life cycle. Based on this observation Hayes and Wheelwright developed the notion of a process life cycle which parallels the well known model of the product life cycle. Typically, manufacturing in the introductory stage of a product is said to be a "fluid" process, characterized by a high flexibility and a low cost efficiency. As the product moves into the next stages of growth and eventually maturity, manufacturing becomes increasingly standardized, mechanized and automated, until it reaches a point where it is very efficient and interrelated. In this phase manufacturing is much less flexible than the initial fluid process [Hayes and Wheelwright, 1979a].

The changing characteristics of the manufacturing process along the product life cycle led Richardson and Gordon [1980] to propose different performance measures for manufacturing in each stage. As they point out, in the introductory stage where frequent design changes occur measures that relate to innovation, flexibility and responsiveness to customer needs are appropriate. In the growth stage, where sales increase rapidly and the product design becomes stable, indicators that relate to the ability to deliver sufficient product turn out to be the most important. These include capacity growth, capacity utilization rates, stockouts, order backlogs, and lost sales. Next, in the maturity stage, where sales still grow but at a declining rate until reaching a plateau, the critical measures of performance are those which gauge the ability to minimize costs and maximize capital and labour productivity. Examples of such measures are cost per unit of output, value added per employee, capital utilized per employee, and output per man-hour [ibid., pp.48-49]. Finally, in the decline stage, where sales drop as the product is substituted by improved or new products, price becomes of paramount importance and so cost minimization and productivity become even more crucial. It is conceivable that companies will be dealing here

simultaneously with the declining product and a new replacement just being introduced. As a consequence, the company will find two products in different stages of their life cycle, and specific measures of manufacturing performance for each product will be called for.

In face of the above, the use of success indicators appropriate for a given stage of the product life cycle for products that are in a different stage will lead to the wrong decisions on the part of managers. For example, if a subsidiary is evaluated on the basis of cost minimization and productivity when its main products are in the introductory stage, as Richardson and Gordon [1980] indeed found to be the case in some instances in their field study of Canadian companies, many dysfunctional consequences are likely to arise. Such consequences will, most commonly, include lack of responsiveness to customer needs, premature freezing of product design in order to standardize production as early as possible, and process inflexibility. All these will certainly lead to higher rates of product failure than might otherwise be anticipated [ibid., p.49].

Reflecting on these observations, Kaplan [1983] extended the Richardson and Gordon [1980] approach to the measurement of manufacturing performance, and attributed the problems presently faced by the U.S. industry to a general incapacity to comprehend the strategic importance of manufacturing in a world of intense competition from countries such as Japan which have a clear superiority in this area. The U.S. are not the only to experience such difficulties, for many other countries, many of them in Europe, feel hopeless in competing with high-quality, low-cost economies.

Kaplan [1983] advocates a departure from the traditional methods of assessment of manufacturing performance which privilege productivity, to a more comprehensive system which closely monitors in companies those facets in which competitors have an edge. In the common case of a corporation producing a mature product with relatively stable characteristics, the evaluation of manufacturing performance should centre on three major dimensions: quality, inventory and productivity [ibid., pp.689-694].

Product quality is said to be emerging as the most important manufacturing performance area. Traditionally, quality has been seen as a statistical problem linked to the definition of an acceptable quality level (AQL). However, as Kaplan [ibid., p.690] remarks in certain countries, and notably in Japan, quality is a state of mind that leads to the philosophy that all defects can be eliminated. Authors [e.g. Crosby, 1979] demonstrated that the zero defect approach does not involve a trade-off between cost and quality since long-term manufacturing costs are inversely proportional to the percentage of defects. Thus, measures of quality are highly desirable in a performance evaluation system. As to the second dimension, inventory, Kaplan argues that the use of the classical inventory models such as the economic order quantity (EOQ) model do not provide companies with the most effective inventory systems. Again the example comes from Japan where the Kanban system [Monden, 1981] and other methods have enabled factories to run with very little or even no raw material inventory, work-in-process, and finished goods inventory. It is said that if set-up costs could be brought to zero, and uncertainties with the delivery of raw materials and the demand for finished products reduced production could be matched closely with demand. In this event companies would not feel the need to hold the same high levels of inventories. Consequently, instead of devising complicated mathematical models to optimize with respect to uncertain lead times and uncertain demand [Kaplan, ibid., p.693], managers should incorporate in their evaluation systems measures of performance which provide an incentive to keep uncertainty in production and in demand low, in order to minimize inventories. Finally, productivity, though the most basic dimension of manufacturing performance requires in Kaplan's opinion a better understanding and the use of more sophisticated measures. Ideally, productivity measurements should supplement traditional financial indicators of manufacturing performance [ibid., p.693], since they should help to identify improvements from physical operations without the confusing influence of the changes in the prices of input factors.

In summary, the choice of non-financial and qualitative success indicators to complement the financial measures in a performance evaluation system should be guided by those key management dimensions

whose monitoring is critical for a corporation. In a world of intense competition on a global international scale corporate success will depend on how competently management information systems are able to handle the relevant data. As Kaplan [1983, pp.688-689] observes:

"Traditional cost accounting systems based on an assumption of long production runs of a standard product, with unchanging characteristics and specifications, will not be relevant in this new environment. The challenge is to devise new internal accounting systems that will be supportive of the firm's new manufacturing strategy. Improved measures of quality, inventory performance, productivity, flexibility, and innovation will be required. Managerial performance measures based on achieving these manufacturing goals should be developed to replace the current emphasis on short-term financial performance measures."

5.5. Summary and Conclusions

The chapter focused on the main instrument of assessment of subunit operating activity : the measure of performance. Different types of measures were reviewed and particular attention was given to those indicators most commonly encountered in the literature. For each indicator discussed, its nature was carefully analysed and its strengths and weaknesses examined. Also, the major consequences arising from the use of each indicator were identified, with the purpose of gaining an understanding of the conditions in which its use is more adequate.

The concept most frequently found at the root of the measures employed in the assessment of divisional performance is the one of profit. The development of the profit concept in performance evaluation is reflected in two assessment criteria which, due to their relatively long history and widespread diffusion, are generally considered the classic profit-based measures of subunit performance.

One of these measures is ROI. This indicator is not only a measure that compares profit with the capital resources employed in its

generation, but is also the centre of an integrated ratio analysis system comprising a battery of indicators that successively unfold from the ROI measure. The history of ROI is directly linked with the spread of corporate decentralization and in particular with the growth of the investment centre concept. Although used for the first time in the beginning of this century, the ROI concept only became generalized in the past three decades. Recent empirical studies suggest that ROI receives a slightly higher preference from U.S. corporations than from companies in the U.K. In both countries, however, it appears that the once predominance of ROI is now waning due to the introduction of other indicators of divisional operating performance.

The other classic profit-based measure is RI. Defended in large academic circles as an indicator preferable to ROI, the RI concept does not enjoy, however, the same kind of acceptance from the practice. Surveys of company practices have shown that in both sides of the Atlantic the use of RI is limited to a relatively small number of firms and that the diffusion of the measure has not progressed in the past two decades. It appears, nevertheless, that RI is encountered with more frequency in British than in American companies. No reasons explaining this apparent lack of success have been ascertained with rigour. Perhaps, one major factor deterring the acceptance of RI is the difficulty of its implementation. In effect, despite its theoretical elegance, RI is of complex application due to the problems found in the determination of a correct cost of capital charge.

Although prevalent in accounting textbooks, RI was subject to an intense debate among academics which involved contrasting views about its conceptual validity as a measure of divisional performance. The chapter followed the arguments presented by the authors with a view to bring some clarification to the debate. Particular attention was paid in uncovering the major assumptions behind the authors' reasoning, and in relating these assumptions with available empirical evidence provided independently. The assumptions were, in general, related to the capability of division managers to use external sources of finance for their working capital requirements and to the degree of divisional managerial autonomy in determining the subunits' capital asset base. The empirical dimension brought to the discussion of the

debate had the effect of placing many of the authors' arguments into perspective, and offering a positivist side to an eminently normative approach.

In order that a full appreciation of the character of ROI and RI might emerge, the discussion of the conceptual nature of the measures was supplemented by a review of their main practical strengths and weaknesses. To a great extent, the advantages and limitations of these two measures are also the advantages and limitations, as experienced in practice, of profit as an indicator of divisional performance. Besides the problems generally encountered in the calculation of net income, difficulties also arise, however, for both ROI and RI in the determination of the amount of capital (fixed and current) employed in a division. Such obstacles to a problem-free computation are related to the technical characteristics of the methods. In addition to this, difficulties emerge in the application of ROI and RI that concern the motivational impact of the criteria among divisional management. The problems of misdirected motivation of division managers, and the technical drawbacks of the measures which may produce misleading information were reviewed in the chapter. In general, the RI method avoids some of the dysfunctional consequences that arise with ROI. Nevertheless, RI does not enable comparisons of efficiency to be made among different subunits, and, in addition, its practical application is marred with difficulties of technical nature. A point that clearly emerged in the chapter was, therefore, that no sole isolated measure of divisional performance is satisfactory. In fact, the assessment of subunits and their managers is best conducted if based on a number of indicators which complement one another and provide a disaggregate pattern of analysis.

The budget is just one of the criteria that can be used in performance evaluation in addition to the classic indicators of divisional performance. The budget is an organizational mechanism of enormous potential, which performs a number of important roles. One of such roles involves the continual monitoring of subunit operations and provides an instrument of analysis which probes into the numerous components of the final profit figure. In this sense, the budget is an analytical measure very different in nature from the synthetic

indicators of ROI and RI. Another important advantage of the budget is that it may be adequately used as a measure of both output and behaviour. Furthermore, the budget facilitates the distinction between the notion of effectiveness and efficiency when performance targets are set for a subunit.

Despite its obvious advantages the budget, like any other performance evaluation criterion, also poses problems in its application. The essence of budget use as a success indicator is contained in the comparison of actual performance with estimated performance (the budget standard). As it was explained in the chapter, this latter figure is set up as the outcome of a bargaining process between superior and subordinate, where the subordinate's behaviour appears to be influenced in a significant manner by the way in which the superior makes use of budgetary information (enforcement of standards, and use of deviations) in the evaluation of performance. As a consequence, the budget standard agreed upon only very rarely approximates the level of performance that reflects the true capabilities of the subunit. Therefore, the application of budgetary deviations to the assessment of performance should be done with caution since according to the style of evaluation and indeed the characteristics of the operating environment, a given level of budgetary slack or optimism may be incorporated in the budget estimates, making the standards of performance to diverge from the performance that could truly be achieved. A model of the variances between budgeted and actual performance was presented in the chapter with the purpose of clarifying the distinction between deviations pertaining to planning (budgets as forecasts) and deviations relating to performance evaluation (budgets as commitments). This model was expanded for a range of situations involving either the forecasted underattainment or the overattainment of targets. This provided a useful instrument for correctly interpreting budget deviations and consequently achieving a sound application of the budget as a criterion for the evaluation of divisional performance.

Although there is a marked tendency in the literature to restrict the discussion of the major success indicators of divisional performance to measures of a financial nature, non-financial indicators, both

quantitative and qualitative should also be perceived as vital for the performance evaluation and control processes. The chapter reviewed such indicators and presented the rationale for their use.

The justification for non-financial performance criteria stems primarily from the weaknesses of financial information which traditionally focuses on short term results rather than on the long term. It is known that the way in which executive compensation is awarded favours yearly or even quarterly profits, and that such a preference for immediate results leads almost inevitably to dysfunctional behaviour on the part of divisional management. In order that managerial decisions may safeguard the company's interests in the long term executive incentives should be closely tied to long range plans and this would involve the utilization of indicators that periodically gauge the achievement of non-financial goals like market share, level and success of R&D, product quality, productivity, and personnel development. Naturally, all these facets of business activity will sooner or later reflect on financial performance. Therefore, their permanent monitoring will provide managers with early warnings of current problems that will show on future profits. Another advantage from the use of non-financial indicators in performance evaluation resides in the fact that they contribute to a more thorough understanding of the specificity of each organizational subunit by those conducting the appraisal. If an adequate application of the principle of authority and controllability is sought, and indeed if the consideration of environmental influences is desired for the evaluation of foreign subsidiaries in a MNC, local situation-specific success indicators are to be used. Non-financial measures in general and qualitative information in particular have exactly these characteristics offering, therefore, the potential for the individuality of each division or subsidiary to be accounted for in the evaluation process.

Having ascertained the need for non-financial indicators in divisional performance evaluation and control, the chapter moved into a discussion of the criteria that can justify the selection of certain measures instead of others. The number of non-financial indicators from which to choose is almost endless, and clearly management

requires a framework on which to draw for the choice of the relevant information. Such a framework is provided by the identification of those key management dimensions whose monitoring is critical for a given business. This principle was illustrated in the chapter for the case of corporations with an important manufacturing activity. As it was demonstrated, the changing characteristics of the production process along the product life cycle require the use of different types of measures for each stage. In sum, corporations must recognize which functions are of strategic importance to them and reflect this in the choice of instruments utilized to monitor subunit performance. If a company wants to stay competitive in domestic and foreign markets it should closely follow those facets in which its strengths lie, and also those in which competitors have an edge.

The present chapter gave an overview of the success indicators of divisional operating performance most commonly found in the literature and discussed their nature and application from a conceptual standpoint. In the next chapter, the use of such indicators in the context of the MNC will be revealed on the basis of the empirical evidence currently available.

Footnotes:

- (1) Only the results of the second phase of the Mauriel and Anthony study are reported here because the data concerning the use of RI collected in the first phase are believed to be largely overstated. This was probably due to design faults of the survey and is acknowledged by the authors [1966, p.104].
- (2) A large body of literature, alternatively, believes that the ex post appraisal of the capital investment decision should be made independently of the evaluation process of divisional operating performance, and should take the form, for example, of post completion audits. According to this view, it is generally assumed that once an investment decision is made and the respective project implemented, the costs involved become "bygone costs" or "sunk costs" [e.g. Henderson and Dearden, 1966]. This being so, the evaluation of divisional operating performance should concentrate on the assessment of how efficient the divisions were in employing the operating resources allocated to them and in implementing the strategic directions provided by the head office. This view is shared in the present work.
- (3) Reece and Cool [1978] found that 95 percent of the companies using the investment centre concept included inventories in their divisions' asset base. Accounts receivable were included in 94 percent of the cases; cash in 63 percent; and other current assets in 76 percent.
- (4) Alternatively, Cyert and March [1963] argue that organizational slack arises unintentionally as a result of the bargaining process, and its crucial role is to act as a mechanism of performance stabilization. Basically, slack would rise when business conditions are favourable, offering a pool of emergency resources that could be utilized when conditions are unfavourable. A similar pattern is suggested by Williamson [1964] who provides some evidence that slack is accumulated in good years and converted into reported results in poor years.
- (5) A detailed review of such studies is found in AAA[1971]. Also authors such as Ferrara [1964], Solomons [1965, ch.8], Hulbert and Toy [1977], and Parker [1978] proposed batteries of non-financial indicators of performance.

CHAPTER 6 - PERFORMANCE EVALUATION AND CONTROL OF FOREIGN SUBSIDIARIES - THE EMPIRICAL EVIDENCE

6.1. Introduction

This chapter surveys the empirical evidence available in the literature as regards the criteria used in MNCs to control and evaluate the performance of foreign subsidiaries and their managers. This contrasts with the previous chapters which constructed a theoretical framework by reviewing the distinctive character of the multinational and by discussing the essence and nature of the subunit performance evaluation and control processes. In this sense the present chapter gives empirical substance to what has been discussed so far throughout the study, and is intended to reveal major gaps and inadequacies from the available evidence.

Over a period of more than a decade a number of empirical studies have focused on the assessment practices employed by international corporations for their foreign subsidiaries. They all concentrate on U.S.-based MNCs, and no study is known to have specifically addressed the problem to U.K.-based multinationals(1).

The review of the empirical literature undertaken in the chapter follows a common pattern for each study surveyed. First, a brief introduction to the investigation is presented together with the description of the methodology employed and the nature of the population and sample. Next, a detailed account of the major findings reached is offered with some pertinent comments. Finally, a summary of conclusions is provided, placing particular emphasis on the discussion of the implications of the study for the present research project.

6.2. Major Empirical Studies

6.2.1. The Mauriel Study

An early study dealing with the performance evaluation systems used by MNCs for their foreign subsidiaries was conducted by John Mauriel in the mid 1960s, and published in 1969. This study followed a previous work with Richard Anthony [Mauriel and Anthony, 1966] where an extensive survey of the practices of divisional performance evaluation was conducted for domestic operations. Although formulated in not so rigorous and comprehensive terms as the previous work, the 1969 study was, nevertheless, a valid attempt to understand the methods used by some MNCs in assessing their foreign subsidiaries, and to detect relevant differences, if any, between the multinational and the domestic unit control systems in operation. The study surveyed the practices of 15 giant American companies whose overseas operations had sales of over US\$ 5 billion. Interviews were conducted at the headquarters level.

The results showed that the use of the profit and investment centre concepts was widespread, and that an increasing emphasis was being placed on ROI as a performance measure, these results being similar to those obtained by Mauriel and Anthony [1966] for domestic operations. Twelve of the 15 corporations interviewed were evaluating their subsidiaries mainly on the basis of ROI, or a form of RI. Absolute profit and profit-as-percentage of sales were also frequently used [Mauriel, 1969, pp.36-37]. When controlling foreign operations, parent companies were found to place a heavy emphasis on budgeting techniques. Standard budgeting and other financial planning techniques used for overseas operations were similar to those employed domestically. The author does not provide much evidence as to whether such techniques were also used as criteria for managerial performance assessment. However, from the detailed description of a particular control system (the one implemented in the 3-M Company) given in appendix as an illustration of the nature of the systems encountered in the study, it can be inferred that the annual review process of overseas operations for planning and control purposes did provide information that was used by parent company officials to judge the

performance and the capabilities of overseas managements [ibid., pp.39-52]. Another important observation of this study was that the flow of information between headquarters and foreign subsidiaries tended to put a heavy emphasis on data of a financial nature [p.37]. Non-financial information which could aid to understand the peculiarities of each operation was usually omitted in the internal reporting systems, leaving the performance evaluation to rely greatly on financial data. Even the most basic information relating to the overall economic situation in each country operated was found, most of the times, not to be included in the reporting systems, therefore making both the budgetary goal-setting and the performance evaluation process very problematic [p.38].

In sum, this study observed a certain number of similarities between domestic and transnational performance evaluation and control systems, namely: 1) the reliance on profit-based measures which summarize the performance of the organizational subunits; 2) the widespread use of standard domestic budgeting and financial planning techniques, and; 3) a heavy emphasis on financial data in the contents of the informational flow between parent and affiliate companies. By applying to their foreign operations the same internal reporting systems as used domestically, the companies appear not to be allowing for the peculiarities of the external environment faced by each subsidiary to be taken into account in the evaluation of unit performance.

6.2.2. The McInnes Study

Another study to provide empirical evidence on the methods actually employed by MNCs in the assessment of their foreign subsidiaries' performance is McInnes [1971]. This research included a survey of the financial reporting and control procedures used by 30 American MNCs of moderate size (sales between US\$ 100-300 million). All the companies manufactured industrial products and had a substantial involvement in overseas business (at least 20 percent of the sales and assets abroad), with subsidiaries in six or more foreign countries. Data

were collected by a mailed questionnaire and by direct interviews. The study focused on the characteristics of the financial reporting systems implemented between corporate headquarters and affiliates, and on the use made by parent companies of the reported data for performance evaluation purposes. A comparison of the procedures employed for foreign and domestic operations was incorporated in the research design, in order that similarities and differences might be detected.

The characterization of the reporting systems showed that there were no important differences between the foreign and domestic systems implemented. In many cases, the volume of information requested to the overseas subsidiaries tended to be lower than the one asked to the domestic units. In fact, in nine companies (i.e. 30 percent of the total sample) the reporting systems were the same for foreign and domestic operations, and among the others, the principal difference noted was that fewer reports were required from foreign than from domestic affiliates [ibid., p.17]. The table below (Table 6.I) gives an idea of the range of reports requested by headquarters on a regular basis. The content of each of these reports was found to be different for foreign operations and for domestic operations: in 13 companies (i.e. 44 percent) the reports of foreign affiliates contained substantially less detail than the reports of domestic units; in 16 companies (i.e. 53 percent) the detail was approximately the same, and in only one company the detail contained in foreign reporting was substantially higher than in domestic reporting [p.17].

With respect to the use of the information contained in the financial reporting systems in performance evaluation, McInnes observed a strong similarity between the range of techniques used for evaluating foreign subsidiaries and domestic units. Nineteen responses (i.e. 63 percent) were identical, and the ones which differed were cases where a higher number of indicators was being used for domestic than for foreign operations [p.19]. In order that the relative importance of each indicator for performance evaluation might be detected, McInnes asked firms to name and rank in order of importance the three control techniques which they found to be most useful. Table 6.II shows the results obtained. Return on investment appears as the indicator

Table 6.I - Number of Companies Having Reports Requested Regularly by Headquarters from Subsidiaries, According to McInnes[1971]

(total number of cases studied = 30)

	Foreign Operations (A)	Domestic Operations (B)	Difference (B-A)
Balance sheet	28	30	+2
Balance sheet supporting data	16	22	+6
Inventory analysis	14	22	+8
Receivables analysis	12	19	7
Income statement	30	30	-
Income statement supporting detail	22	26	+4
Product line income statements	14	21	+7
Cash flow	10	18	+8
Sales analysis	14	20	+6
Order backlog analysis	18	23	+5
Local borrowing position	21	19	-2
Others (frequency less than 10)	20	21	+1
Total	219	271	+52
Average number of reports per company	7	9	

Source: Adapted from McInnes [1971, p.17]

Table 6.II - Most Important Success Indicators Used in Evaluating Operations, According to McInnes [1971]

	Foreign Operations		Domestic Operations	
	Frequency of mention	Weighted frequency (1)	Frequency of mention	Weighted frequency (1)
Return on investment	21	50	19	48
Comparison with plan	17	42	19	48
Comparison with history	11	20	10	17
Analysis of income statement	9	16	7	13
Analysis of balance sheet	--	--	5	6
Other criteria mentioned by firms (e.g. market share, comparison of costs with a budget, etc.)	n.a.	n.a.	n.a.	n.a.

NOTES: (1) The weights assigned to each item were 3, 2, or 1, according to them being positioned in first, second, or third places, respectively.

n.a. Data not available from the published results.

Source: McInnes [1971, p.21]

most frequently mentioned by the respondents. For controlling overseas operations, ROI happens to be the dominant criterion, whereas for domestic operations a comparison of actual results with plan is as important as ROI (see table). Twenty-three companies (i.e. 77 percent) gave basically the same answers for foreign affiliates and domestic operating units; the differences noted tended towards a greater emphasis on **"purely financial techniques of analysis"** in the case of overseas operations [p.21]. McInnes also reports that from interviews he was able to conclude that headquarters tended to accord less importance to budgetary cost control and to measures of manufacturing efficiency when evaluating foreign operations than when assessing domestic operations. The basic reason may be related to a less involvement of headquarters in the management of their businesses abroad [p.20].

In brief, the main findings of this study support the view that there are very little important differences both in the design and in the use of financial reporting systems for foreign and domestic operations. Further, it was found a tendency for the parent companies to rely almost exclusively on financial indicators of performance, mainly ROI, when assessing the operations of their subsidiaries abroad. When drawing conclusions from his study, McInnes stated that :

"[...] the similarity [of financial reporting systems for foreign operations and domestic operations] does not appear to be the result of an oversight, but instead results from a conscious choice on the part of the managements." [p.26]

And he justifies such an assertion declaring that the data obtained seems to demonstrate that top managers in headquarters of MNCs have as one of their aims the design and implementation of financial reporting and control systems which are uniformly applicable to all units of the company regardless of their geographic location [p.26]. No sufficient evidence is provided in the study to assert the validity of this statement. Neither the exact reasons for top managers to prefer uniformity and rigidity in the reporting systems instead of more flexible ways of reporting, which could account for the peculiarities of overseas operations, are given by McInnes. However, at a certain point of his paper [p.16], he suggests that the similarities between

domestic and foreign control systems could be mainly due to the urgency of getting information about newly implemented operations and to the familiarity with the systems being used domestically. As he points out:

"In practice, there tends to be a lag between the development of information systems and the development of the organization and its operations. As a consequence, manager's needs for information are usually pressing. Faced by such a situation [...] a corporate controller will install a management reporting system abroad which has been used and found effective domestically, and is, at the same time, familiar to corporate operating management." [p.16]

Data were not collected in the study to either confirm or reject this hypothetical explanation for the similarity between domestic and foreign reporting and control systems. An important question remains, then, unanswered: Is this similarity the result of a conscious and well-pondered decision by the managers involved in the control and evaluation of foreign subsidiaries? And in the affirmative case, has such a decision included consideration of the difficulties that may arise in the performance evaluation process from the existence of specific problems faced by units operating in environments very different from home?

6.2.3. The Bursk et al. Study

By the time McInnes [1971] reported the findings of his work, the results of another study, sponsored by the research foundation of the American Financial Executives Institut were also published. This study, conducted by Bursk, Dearden, Hawkins, and Longstreet was designed to codify the methods of financial control actually in use by MNCs and to evaluate the success of these control systems. Rather comprehensive questionnaires and interviews were used to gather the data. However, like the precedent studies, a small sample of companies was surveyed. As the authors acknowledge [Bursk et al., 1971, p.3], this fact reflects the exploratory nature of the study and the attempt to understand each case to its every possible detail. A 36-page questionnaire was mailed to MNCs having at least one top financial

officer as a member of the Institute, and regularly publishing separate figures for some aspects of their foreign operations in their annual reports. A companion 21-page questionnaire was also sent to each of these firms with the request that the head office forwarded the questionnaire to two of its subsidiaries. Usable responses were received from 34 corporations (2).

The data on current practices that were obtained, demonstrate a heavy emphasis placed by headquarters on profit as the basic indicator of performance for their subsidiaries abroad. In fact, as many as 94 percent (3) of the companies surveyed held their foreign units responsible for profit performance. The principal measure of profitability used was absolute profit as compared to an annual objective (56 percent of the cases), followed by ROI (29 percent of the total); RI was employed in only one percent of the companies [ibid., p.25]. One indication of the importance attributed by parent companies to the profit results obtained by subsidiaries, when evaluating managerial performance, is the influence that such results have on the determination of the supplemental compensation of subsidiary managers. As such, a question was included to determine the extent to which supplemental compensation in the foreign affiliate was tied to its profitability. The results show that in nearly 40 percent of the cases, bonuses were based directly on profit performance; in 35 percent, bonuses were influenced by profit performance but the amount was determined by top management judgement rather than formula, and in only 8 percent of the total were bonuses unaffected by profit performance [ibid., p.29].

As regards the method used for setting up the profit objective for a given year, in over one-half of the respondents such method was based on the budget approved for each unit; in a quarter of the respondents the profit objective of the subsidiaries was established in accordance to the profit objective of the company, and in almost another quarter it was based on management judgement [p.27]. With the information that is provided by the study it is very difficult to ascertain the extent to which the environmental peculiarities of each subsidiary were taken into account when the profit objective was set up. It appears, however, that in most cases environmental considerations were not

being given much thought. This conclusion is drawn from the answers to a question in which the authors asked the companies which techniques they were using to confirm whether each subsidiary had a reasonable profit objective. Improvement over the previous time period, comparison with other company businesses, and comparison with competitive businesses accounted for nearly 75 percent of the answers; only the rest stated that the profit objectives were based on a forecast of the economic conditions faced by each foreign affiliate [p.28].

Another important conclusion of this study was that the overwhelming majority of the companies used the same or very similar systems to control foreign subsidiaries and domestic divisions, what is consistent with the findings of the previous works reviewed. As many as 78 percent of the firms participating in the survey indicated that the control systems for foreign units were the same as those used for domestic operations, 13 percent indicated that they were little different, and only 9 percent considered that they were significantly or entirely different (6 and 3 percent, respectively) [p.29].

With respect to the accounting procedures adopted by the firms for calculating the indicators used in the evaluation of their foreign subsidiaries' performance, the Bursk et al. study inquired into the methods actually employed in the calculation of overseas units' investment base, and drew a parallel with the Mauriel and Anthony [1966] survey for domestic operations. The findings indicated that the fixed assets were included in the investment base at net book value in two-thirds of the cases, and at gross book value in one-third, what was quite close to the results obtained by Mauriel and Anthony for domestic divisions; as regards the calculation of the subsidiaries' current investment, liabilities were deducted from current assets in nearly 80 percent of the companies, this percentage being twice as much as the one found for domestic units (vide chapter on the practical advantages and limitations of ROI and RI, where these results from the Mauriel and Anthony [1966] survey have been reviewed). The organizational characteristics of foreign subsidiaries vis-a-vis domestic divisions, present a plausible explanation for this particular difference. As Bursk et al observe, in domestic operations

payments are often made centrally and many current liabilities are not assigned to particular divisions, as it is the case, for example, of income taxes payable. By contrast, foreign affiliates are independent companies which have to report separately in order to submit themselves to the regulations of the jurisdictions under which they operate; besides, the managers of foreign affiliates tend to have more freedom in the operating management of their units.

Recognizing the conceptual need for some environmental aspects of overseas operations to be taken into account in the performance evaluation of foreign subsidiaries, Bursk et al. attempted to ascertain to which extent the actual corporate control systems were responsive to the particular overseas environmental factors. The information gathered by the study does not enable, nevertheless, the drawing of any safe conclusions in this regard, a consequence perhaps of an insufficient development of the subject in the questionnaire (questions 1 to 7 in Part III, Section A of both questionnaires) When communicating the results, the authors report that headquarters executives tended by a small margin to believe that their companies' control system was "adequately" taking care of environmental factors, and foreign subsidiary executives tended to consider their companies' treatment of environmental peculiarities as **"not entirely adequate, but acceptable"** [p.39]. Therefore, in strict accordance to such results it could be concluded that the environmental peculiarities although not being ideally accounted for by the control systems used for overseas operations, were generally present in the control process in a satisfactory way. This was not, however, the interpretation made by the authors. In effect, where the most relevant findings of the research are summarized, one notices that Bursk et al. opted for concluding that **"those responsible for designing and administering financial control systems often do not fully appreciate the relevance of the peculiar characteristics of the diverse international environment to their task"** [p.6]. No sufficient evidence is provided for supporting this interpretation. It is true that such a view is in consonance with the basic characteristics of the evaluation and control process in use by the firms investigated (i.e. high concentration on profits as indicators of performance, similarity in the methods employed for the appraisal of foreign and domestic

operations, and environmental peculiarities of foreign operations not being given much thought in the setting of profit objectives for the subsidiaries). However, the study fails to determine whether, as the authors appear to conclude, the opinion held by executives about the adequacy of the performance systems operated in their firms, was due to a lack of appreciation by such executives of the relevance of the environment for the subsidiary evaluation process, or whether it was dictated, for example, by the existence of informal information in the evaluation process, in a successful effort to overcome the deficiencies of the formal system. The omission of this latter aspect, constitutes a shortcoming of the study findings as far as the investigation of the degree of environmental representation in performance evaluation is concerned.

In conclusion, the Bursk et al. study demonstrates the wide use and emphasis put on profit by headquarters of American MNCs in the control and assessment of their foreign subsidiaries' performance; from here it can be inferred that non-profit-based indicators of performance have a virtually negligible role in the evaluation and control processes. Moreover, very strong similarities between the characteristics of the systems used to control foreign subsidiaries and domestic divisions have been found in the great majority of the cases. A tentative explanation for this, put forward by the authors [p.40], is based on the supposition that a number of reasons such as expedience, ease of design and application, less sophistication of subsidiaries abroad, and initial overseas operations in stable, low-risk, domestic-like environments, led companies to implement control systems for their overseas businesses very much alike to the systems used for their domestic operations. Despite this similarity, the consideration of some environmental conditions peculiar to each subsidiary appears not to be completely absent in the evaluation process.

One innovation of the Bursk et al. study was that not only headquarters executives, but also subsidiary managers, were questioned about the evaluation and control process operated in the firms, in the hope that the views of the latter might differ from those of the former. It was thought, that a better understanding of

the issues investigated would emerge in this way. Contrary to what had been expected by the authors, the results do not show important differences in the views of the two sides involved in the evaluation process, since the managers of overseas units strongly endorsed the methods used by parent companies in the assessment of foreign units' performance. Such results are, however, of little value because, as the authors acknowledge [p.30], the study has a design weakness whose consequences have probably led to response bias: first, the subsidiaries participating in the study were not selected by the researchers but by the parent companies instead; thereby the units selected could have been those where the internal control system was operating better than average; second, because it has not been made very explicit that the responses were not to be seen by parent company executives, there may have been some reluctance on the part of the subsidiaries managers to criticize headquarters systems.

The interesting feature of the Bursk et al. study is that it raises the important problem of the inclusion of environmental peculiarities in the assessment of overseas operations. The results obtained, however, do not provide a clear understanding of the companies' practice. The determination of the extent to which environmental characteristics specific to foreign host countries are accounted for by the control systems in operation in MNCs, and, more important, of how they are accounted for, are questions that Bursk et al.'s study leaves unanswered.

6.2.4. The Robbins and Stobaugh Study

As part of the "Harvard Business School's Multinational Enterprise Study", Sidney Robbins and Robert Stobaugh conducted research on MNCs' financial practices, achieving some quite interesting findings as far as evaluation of subsidiary performance is concerned [Robbins and Stobaugh, 1973a, and 1973b]. The authors extensively interviewed and analysed the unpublished records of 39 companies. Additionally, they also studied the published records of a vast number of corporations. These two groups of firms represented all major U.S. industries with

investments abroad; the smallest company studied had total sales of US\$ 100 million and foreign sales of US\$ 20 million, whereas the largest company had several billions of dollars in foreign sales [1973b, p.81].

The findings of this study corroborate the basic conclusions drawn by the previous surveys. In fact, very strong similarities in the performance evaluation processes used for domestic and foreign units, were also found here. Furthermore, emphasis on a profit-based indicator of subsidiary performance, allegedly expressive and comprehensive, was found to be a common characteristic to most evaluation criteria adopted by parent companies. As much as 95 percent of the headquarters financial managers interviewed said that foreign subsidiaries were judged on **"precisely the same basis"** as domestic subsidiaries [1973b, p.82]. Almost without exception, these officers used ROI as the basic measure of performance. Only in those few companies engaged in rapidly expanding fields and thus firmly orientated towards growth, was ROI not the main performance indicator, return on sales being preferred instead [1973a, p.143]. The investment base in ROI calculation tended to equal the amount of equity or the amount of total assets after depreciation; only in a small number of firms the investment base was total assets before depreciation. Though being generally regarded as the basic measure of subsidiary performance, ROI was not found alone in the evaluation process, for other supplementary indicators of performance were also in use.

The authors also found that the use of the budget in performance evaluation is widespread and that **"multinational enterprises almost universally follow the same budgetary procedures in their foreign and domestic operations"** [1973b, p.83]. All the subsidiaries were usually required to report at the same time substantially the same information in the same format. The budget procedures, as reported in the study, typically culminated in two sets of documents: a capital budget, prepared on a yearly basis, where individual projects were listed and analysed; and an operating budget, prepared on a monthly or quarterly basis for the forthcoming fiscal year, which contained cash flow projections, income statements and balance sheets. A long term plan in budget form (five years or more) was also required in 74 percent of

the companies in the sample [1973b, p.83]. The final approval of the subsidiaries' budgets was generally done at the highest levels in the organization, frequently by the president or by the board of directors [1973a, p.144]. The use of the budget was regarded by the companies participating in the study as a means of taking into account the specificity of each operation in the evaluation process. The differences among foreign units were considered through the setting of different standards of performance, adapted to the realities of local conditions. However, it was found that the overemphasis placed by headquarters on ROI had as a consequence the offsetting of any serious consideration of subsidiaries' peculiarities. In fact, top management's final judgements were almost invariably made in ROI terms. As the authors put it:

"In theory, MNEs use the budget to take into account the circumstances peculiar to each subsidiary. But, in fact, executives in these companies are so caught up in the extensiveness of their international empires that they return again and again to a tangible and simple measure of performance - ROI. Thus even multinational enterprises that use the budget as a supplementary measurement of subsidiary performance still select ROI as the key item in the budget."[1973b, p.83, emphasis added]

Behind this general picture of how multinationals evaluate performance, Robbins and Stobaugh found that clear variations in the characteristics of the control systems and subsidiary evaluation processes actually in operation, occurred according to the size of each MNC's foreign businesses. They clustered the companies in their sample in the three following groups: 1) small MNCs, with total annual sales of the foreign units amounting to a maximum of US\$ 100 million; 2) medium MNCs, with foreign sales ranging from US\$ 100 to 500 million; 3) large MNCs, with foreign sales of over US\$ 500 million [1973a, chapter3]. For each of these three groups the authors were able to identify some common features inherent to the evaluation processes in use for foreign subsidiaries.

In the small enterprises the distinctive characteristic was the informality of the appraisal. It was found that headquarters' managers were reluctant to implement extensive and burdensome internal reporting systems to be forwarded by subsidiaries, and that their

evaluation of foreign operations tended to rely heavily on personal visits. Budget procedures for the affiliates abroad were usually much less sophisticated than they were domestically, and in some cases the budget was not even used as an instrument of evaluation because headquarters simply did not consider themselves capable of making independent judgements. The sole formal indicator of subsidiary performance was ROI, this measure being calculated on an individual basis in which each unit was taken as a separate entity. There was no reference to benefits received or costs incurred elsewhere in the company, even when they significantly affected the unit's performance [1973a, ch.8]. In the medium corporations, on the contrary, the budget was already extensively used as a performance indicator supporting and supplementing the principal measure - ROI. Budgetary policies were relatively relaxed, and, as the authors remark, firms had not yet developed the extensive formal adjustments and rules-of-thumb that large companies, with more experience, tended to use in comparing one subsidiary with another. Interestingly enough, it was among medium companies, and not in large firms, that Robbins and Stobaugh discovered the highest proportion of cases taking into account, for unit evaluation purposes, the income and assets of the total company on an integrated manner rather than the income and assets of each subsidiary as an independent entity. Finally, in the large multinationals the evaluation process was mainly characterized by a very marked rigidity and impersonality. All signs of informality encountered in different degrees in the two other groups were nonexistent here. The budget tended to assume a vital importance in the control of subsidiaries' operations, and the budgetary process was a "compulsive ritual" in which all organizational participants were involved. Apart from ROI, always present, performance evaluation in large firms was found to be built around a host of procedures, directives and institutionalized rules-of-thumb standards. This was certainly a consequence of the importance assumed by the manual of procedures or the "rule-book" in such companies, as the major guide to the relations between parent company and affiliates [1973a, ch.2]. As a result, there tended to be an impersonal evaluation at headquarters level, aggravated in those cases where long distance and communication difficulties created obstacles to direct exchanges [1973a, ch.8].

In summary, this study basically found the same criteria for the evaluation of domestic and foreign organizational units, and stressed the complete reliance put by headquarters of MNCs on profit-based measures, particularly on ROI, as the key indicator of subsidiary performance. The role of the budget as a supplementary criterion for performance evaluation was extensively examined by the authors. Although the budget was generally regarded by the people interviewed as a tool enabling peculiarities of each operation to be taken into account in the evaluation and control process, Robbins and Stobaugh found that important differences among foreign units were usually overlooked. It should be noted that the focus of the study as far as such differences are concerned, was mainly on those factors affecting units' operations that are internal to the enterprise, i.e. decisions taken centrally regarding, for instance, transfer prices, charges for the parent's technology and services rendered, and investments in subsidiaries that are subject to strategic considerations sometimes having little to do with immediate economic benefits. The influences of external environmental factors on foreign units and their impact on the unit performance evaluation process was a problem only marginally addressed in the study. One of the main thrusts of Robbins and Stobaugh's research is the relationship they were able to identify between size of MNCs and characteristics of the evaluation methods used to assess performance of their foreign subsidiaries. In the description of such methods, some insights into informal aspects of the evaluation process, such as personal visits and supplementary information used in practice to differentiate subsidiaries, were given by the authors. The recognition, even implicit, that beyond the formal criteria of performance evaluation there may be an informal assessment which may compensate for some of the flaws of the formal systems, is a major step forward towards the understanding of subsidiary performance evaluation in multinationals. Robbins and Stobaugh's study has the merit of raising the issue, though in a somewhat vague manner. The real importance, role and implications of an informal evaluation of performance made by headquarters managers of MNCs, have, nevertheless, still to be determined.

6.2.5. The Persen and Van Lessig Study

In 1979, the research foundation of the American Financial Executives Institute commissioned Business International to undertake a survey on the techniques employed by MNCs for measuring the financial performance of overseas operations. The study, conducted by William Persen and Van Lessig, is a follow-up of the survey carried out eight years earlier by Bursk et al [1971] under the sponsorship of the same research foundation.

Persen and Van Lessig's [1979] study is based on data collected from a questionnaire and personal interviews. The questionnaire was mailed to "approximately 400 top international companies, all based in the U.S." (4). A total of 125 filled-in questionnaires were received. A characterization of the response sample according to size of companies' international sales (excluding exports), degree of companies' international sales compared with their total sales, and industry classification was provided by the authors [ibid., pp.8-9]. The interviews were conducted both in companies' headquarters in the U.S. (20 corporations), and in subsidiaries in Europe (two or more field locations for each of 8 corporations). The way in which results are reported tend to emphasize information gathered in the interviews. Companies' practices are described mainly through the voice of executives, rather than through the analytical eye of the researchers. In fact, the whole book is packed with quotations of managers collected in interviews, and comparatively little information from questionnaires is reported in aggregate form. This approach, while certainly adding colour to the text, results in that a general view of the practices followed by companies is very difficult to achieve by the reader.

A major objective of the study was, according to the authors, "to identify and analyze [...] the techniques companies use to eliminate or neutralize the distorting effects of widely varying national business environments - including fluctuating exchange rates - in order to secure a common ground against which to measure the financial performance of their individual operations overseas" [p.5, emphasis

added]. Given this objective, it would be natural to expect that the study addressed the case of companies operating in a wide spectrum of national environments, spread over different geographic areas in the world. Behind this idea lies the assumption that the differences in environmental characteristics across countries in distinct large geographic zones, such as continents, are generally higher than the differences across countries located in a same zone. In other words, two countries in Europe, for example, are likely to have more similarities between themselves than one country in Europe, and another, say, in Africa, or the Middle East. Therefore, if a study proposes to analyse the effects of **"widely varying national business environments"**, it should not restrict itself to one sole geographic area. Persen and Van Lessig's study focus on the practices of American MNCs towards operations in Europe only (5), which is, besides, the continent presenting perhaps the least amount of environmental differences in relation to the U.S. This design weakness of the study leads to some results having to be carefully interpreted.

Before describing the principle evaluation techniques employed in MNCs, the Persen and Van Lessig study examines the companies' financial reporting systems, emphasizing the type and frequency of information submitted by operations to the head office. This constitutes a major strength of the study, and is based on the premise that a firm cannot effectively evaluate the performance of its foreign operations, without having previously developed an adequate means to obtain the information upon which analysis is based [p.29]. Table 6.III presents the frequency with which some common financial reports are submitted by foreign operations. Balance sheet and income statement are included in every company's financial reporting system, and in most cases they are submitted on a monthly basis. Receivables analysis, report on foreign exchange gains or losses, and funds flow analysis are also present in almost every system. It is noteworthy that an item - order backlog report - which is included in only slightly more than half of the companies, has the highest reporting frequency of all the items listed (92 percent of the companies which include order backlog reports in their reporting systems have the item submitted by affiliates every week or every month).

Table 6.III - Incidence and Reporting Frequency of Items Included in Companies' Financial Reporting Systems, According to Persen and Van Lessig [1979]

Type of report	No. of companies which have the item included in their financial reporting system (N)	Reporting frequency (in % of N)			
		Weekly	Monthly	Quarterly	Semi-Annually
Balance sheet	124 (99%)	-	84	15	-
Income statement	125 (100%)	1	94	5	-
Receivables analysis	115 (92%)	1	76	18	1
Inventory analysis	110 (88%)	2	77	16	1
Funds flow analysis	111 (89%)	2	46	42	-
Sales analysis	109 (87%)	7	83	7	-
Borrowing schedule	106 (85%)	5	61	26	1
Order backlog report	71 (57%)	18	74	7	-
Wage/cost analysis	69 (55%)	-	35	11	7
Inflation impact analysis	50 (40%)	-	28	15	8
Foreign exchange gains or losses report	113 (90%)	2	83	11	1
Foreign exchange exposure report	100 (80%)	8	60	20	-
					3

Source: Adapted from Persen and Van Lessig [1979, pp.33-34]

The authors report only minor differences among the various categories of respondents as regards type and frequency of reports submitted [p.34]. It appears that not only here but throughout the whole study no statistical inferential techniques were used to determine significant differences in companies' practices across firms classified according to different criteria.

Persen and Van Lessig's study examines in considerable detail the techniques which companies use to measure the performance of their overseas affiliates. Two basic criteria are employed by firms: variance analysis, and ratio analysis. The former implies the use of budgeting comparisons, whereas the latter involves the application of indicators of performance based on historical data. Respondents to the questionnaire were asked to compare the importance of each performance criterium at the time of the study with the importance the same criterium had five years earlier, and it was expected to have five years later. Despite the difficulties inherent to such a question, which the authors acknowledge [p.64], some indication of the relative importance of the various instruments over time is provided. Table 6.IV lists the percentage of companies which attributed to each assessment criteria the rating 1 on a scale of 1 to 3 (where 1 means the highest importance). Operating budget comparisons was the only technique given a top rating by the majority of companies at the time of the study. Highly international corporations were found to have a higher preference for the budget as a performance assessment technique than corporations with low international involvement [p.65]. The primary responsibility for the initial generation of budgets was found to lie usually with the subsidiaries, this being a result of high levels of decentralization in companies. However, the authors noted a trend towards increased parent company involvement in setting up subsidiaries' budgets, as a consequence of the changes taking place in the international business environment [pp.49-53]. As Persen and Van Lessig point out: **"Growing competition, increasingly complex environmental constraints and higher demands on limited corporate resources seem to be effecting ever-increasing involvement by corporate headquarters in all phases of the budgeting process"** [p.53].

**Table 6.IV - Assessment Techniques Used for Overseas Operations,
According to Persen and Van Lessig [1979]**

	(% of total number of respondents)		
	At the time of the study	Past	Future
Operating budget comparisons	62	50	59
Contribution to earnings per share	44	45	42
Return on investment	40	32	54
Contribution to corporate cash flow	35	14	55
Return on sales	34	32	34
Return on assets	34	21	41
Asset/liability management	30	9	50
Non-accounting data	16	13	22
Long term plan comparisons	12	6	23

NOTE: Percentages refer to companies which attributed to each item the top rating in a scale of 1 to 3.

Source: Persen and Van Lessig [1979, p.68]

After budget comparisons, the most important evaluation techniques indicated by companies were contribution to earnings per share and ROI (see Table 6.IV), both of which emphasize profit. The most highly rated non-profit-based measure was contribution to corporate cash flow (rated top by 35 percent of the total), followed by asset/liability management (rated top by 30 percent). Comparing the importance attributed to each assessment technique at the time of the study with the importance foreseen five years into the future non-profit-based measures came out better. The two single items which registered the highest increase in emphasis were contribution to corporate cash flow and asset/liability management, both with an increase of 20 percentage points (Table 6.IV). Also showing a rise in emphasis were long-term plan comparisons and non-accounting data (e.g. market share, quality controls, labour turnover etc.). The only profit-based measure pointing to a progress in emphasis over the future was ROI (and its equivalent return on assets), with an increase of 14 percent (Table 6.IV).

The accounting procedures adopted by companies in the computation of the major return indicators were explored by Persen and Van Lessig [pp.73-80]. Findings revealed that the overwhelming majority of companies (83 percent) included fixed assets in the investment base net of depreciation, whereas only a small minority (17 percent) employed a gross basis. As regards the calculation of operations' current investment, the study is not very clear as to the extent of cases where current liabilities were deducted from current assets. The measurement of profits was also found to be subject to a large variation.

In what concerns a comparison between the evaluation practices used for foreign and domestic operations, the Persen and Van Lessig study confirms the findings of previous surveys insofar as many important similarities were generally found between the systems used for both types of operations. In particular, 83 percent of the sample companies said that they received from overseas affiliates and from domestic operations exactly the same reports, with the same frequency

[p.34]. Besides, the operating budget system, already described as the single most important evaluation technique used by companies, was found to be the same for operations at home and abroad in 90 percent of the cases [p.46]. Also, for the use of ratios in the monitoring of subsidiary performance no important difference was encountered between the practices followed for foreign and domestic operations in the majority of the cases (69 percent) [p.80].

Methods employed for setting up affiliates' return criteria were also the object of analysis in the study being reviewed [pp.82-86]. The operating budget was considered to be the most commonly used basis of comparison for actual results. Other methods included historic results and values obtained by comparable units. As Persen and Van Lessig report, some companies adopted a rather inflexible approach consisting of **"a fairly standard rate of return expectation corporatewide for all their operations"** [p.82]. In other cases, efforts have been made to introduce more flexible criteria in assigning targets to subsidiaries. However, the authors conclude that **"few companies have developed formalized procedures for establishing individual standards for affiliates based on the particular circumstances relevant to each"** [p.84].

Given that small differences were generally found between evaluation practices for overseas and domestic operations, and that targets assigned to foreign affiliates do not seem to be particularly tailored to the specificity of each operation, one is led to think that environmental differences among subsidiaries are not being given enough consideration in performance assessment. The Persen and Van Lessig study made an attempt to clarify how headquarters managers overcome the complicating aspects posed by differing environmental host country influences in the evaluation of foreign subsidiary performance [ch.9]. Results show that environmental factors were not taken into particular consideration when evaluating the performance of foreign operations. Inflation, for example, was not being taken into account in the evaluation process in 70 percent of the companies; in addition, in more than 90 percent of the total, inflation was not treated differently when evaluating overseas and domestic operations [pp.110-111]. This evidence seems to confirm the idea that

environmental differences among subsidiaries were not being accounted for in the performance evaluation process. Such a conclusion cannot be made, however, due to the design weakness reported in the beginning of the present sub-section. In fact, by investigating companies' evaluation practices used only for European operations, the Persen and Van Lessig study compromised the reach of its findings. The implications of having addressed the study to operations in Europe exclusively, can be illustrated by the results obtained from a question that asked which of ten non-financial factors might be considered as obstacles to evaluation in the companies' three most important European subsidiaries. As the authors acknowledge, **"the most noteworthy finding from the responses to this question was the fact that a large portion of the 125 respondents did not answer at all, indicating that there were no non-financial factors that they considered as obstacles to their evaluation of European operations"** [p.113]. Despite this, the executives surveyed demonstrated to perceive important differences in the evaluation of the performance of domestic and overseas operations, when the latter are not restricted to Europe. The differences most commonly pointed out referred to the variety of currencies and inflation rates, as well as to the variation in financial and economic conditions, and to the multiplicity of government regulations and controls [p.114].

To summarize, the Persen and Van Lessig study covers a wide range of topics in foreign subsidiary performance evaluation and provides some interesting evidence as to companies' practices. It is perhaps to regret the fact that the authors have not opted for a thorough exploration of the questionnaire data they had available, in order to extend the analysis beyond the simple descriptive stage into areas where sets of relationships among variables could be investigated.

Comparing with the results obtained by previous studies, Persen and Van Lessig's survey revealed a smaller concentration on profit when companies headquarters evaluate the performance of foreign subsidiaries. While profit was still a fundamental element in performance assessment, projections to the future pointed into the direction that its dominance would tend to decline with the emergence of a number of non-profit-based indicators such as cash flow,

asset/liability management, and non-accounting data. As regards differences between evaluation criteria used for foreign and domestic operations, the study simply confirms the findings of others, in that many similarities exist between the criteria used for the two sets of operations. Also targets for overseas subsidiaries were not found to reasonably recognize the different nature of each operation. As it was extensively discussed above, these findings lack the evidence that would otherwise be provided had the study collected information about evaluation criteria employed in the whole spectrum of overseas operations in a company, instead of restricting itself to affiliates operating in Europe. Notwithstanding, the Persen and Van Lessig study brings a major contribution to the available body of existing empirical evidence, by examining in considerable detail MNCs' internal reporting systems.

6.2.6. The Morsicato Study

An important study by Helen Gernon Morsicato carefully surveyed the internal performance evaluation practices used in some American MNCs, having identified a few significant relationships between the features of the systems and the characteristics of the firms in which they are operated. This study was presented in 1978 as the author's doctoral thesis and was published in book form in 1980. A summarized description of the research design and conclusions, can also be found in two complementary articles: Morsicato and Radebaugh [1979], and Morsicato and Diamond [1980]. The emphasis of the study is on the use of U.S. dollar and local currency information by headquarters of multinationals in evaluating the performance of their foreign subsidiaries and managers. Differences in firm size, company organizational structure, and operating environment faced by foreign subsidiaries, were related to the particular U.S. dollar / local currency methods used by the corporations.

The main survey instrument used in the research was a questionnaire mailed to 293 U.S.-based companies producing basic chemicals or manufacturing products by predominantly chemical processes and having

at least one manufacturing subsidiary abroad. The decision of selecting a sample from a population which included one single industry, was taken, as the author explains, to ensure a common characteristic among all the firms studied [Morsicato, 1980, p.71]. Usable responses were received from 70 companies, and from the answers given to key questions in the questionnaire, 33 firms were chosen for follow-up interviews (17 were visited personally, and 16 interviewed by telephone). The selection of such firms for interview purposes was such that they were equally distributed among three groups with different commitment to foreign operations. These three groups were defined in terms of annual sales of each firm's foreign operations, and correspond to the MNCs size categories defined by Robbins and Stobaugh in their 1973 study.

The results of the survey on the foreign subsidiary evaluation methods employed by the companies showed that, similarly to other previous studies, the most common financial measures used as indicators of performance were absolute profit, ROI, and the budget (either compared to actual profits or compared to actual sales). The use of RI was found to be very limited (only nearly 20 percent of the firms). The use of such measures was found to be higher after translation in U.S. dollars than in local currency (i.e. before translation). For example, whereas 80 percent of all the respondents reported the use of ROI after translation, only about 53 percent of the companies employed ROI before translation. Only for the budget was the number of firms using this measure after translation (79 percent) approximate to those using it before translation (73 percent).

The study also found that 90 percent of the MNCs surveyed used the same basic techniques to evaluate subsidiary performance as they used to evaluate managerial performance. Likewise, 90 percent of the corporations reported that they were applying the same performance evaluation methods domestically as they were abroad. For the seven firms (i.e. 10 percent) which used different systems at home and abroad, differences in the external environment and the organizational structure were the basic reasons preventing the use of identical evaluation techniques for all subsidiaries (ibid., pp.86-87).

In evaluating the performance of foreign operations, MNCs used some standards **"as a basis for comparison against the subsidiaries actual balance sheet and income statement"**. The results obtained show that the most used standards for comparison were, by order of importance: 1) historical data of the subsidiary (i.e. previous periods balance sheets and income statements); 2) other similar manufacturing units of the firm in the U.S.; 3) other similar manufacturing units of the firm in different countries; and 4) other similar manufacturing units of the firm in the same country.

The analysis of the data by firm size showed that the small companies (annual sales of foreign operations of less than US\$ 100 million) had a preference for ROI and profit after translation as indicators of internal performance, profit and budget being the indicators most frequently used before translation. The medium-sized firms (foreign sales ranging from US\$ 100 to 500 million) tended to prefer a mixture of budget, ROI, and profit information after translation, also using cash flow from operations as an important indicator of performance. As to the large firms (foreign sales of over US\$ 500 million), it was found that they emphasized budgeting both after and before translation more than either the small and medium corporations; for the large firms, ROI seemed not to be as important a performance measure as for the other companies. A more detailed breakdown of these results is presented in Table 6.V. From the data collected, no statistically significant difference was found between the preference for the after- or before-translation measures, with perhaps the exception of the medium-sized firms which showed some preference for after-translation measures [p.89]. This contradicts Morsicato's hypotheses, according to which large MNCs would be local currency oriented and small corporations U.S. dollar oriented, with medium firms in between and showing no real preference for either one or the other type of information [p.6].

Also in this study, Morsicato sought to explore some possible interactions between the operating external environment and the performance evaluation methods employed by the companies. For this purpose three questions specifically dealing with environmental issues were included in the questionnaire but the information generated was

too limited in scope and depth to allow a well founded picture to emerge. In order to determine **"whether or not a firm's system of internal performance evaluation is designed to reflect environmental differences, that may be of greater concern in one geographic area than another"** [p.92], Morsicato introduced one single question in the questionnaire and collected the responses in a five-point scale. From all the respondents, 41 firms (i.e. 59 percent) reported that their internal systems had been designed to include environmental differences less than moderately. However, headquarters managers in 45 companies (i.e. 64 percent) stated that in their opinion a system of internal performance evaluation should at least moderately reflect environmental differences. A further analysis of the data concluded that neither the size of the firm (large, medium, small firm) nor the specific geographic location of the subsidiary (namely Europe, the Middle East, Africa, Asia, Australia, Latin America and Canada) had influence on the design of the performance evaluation system, and its capabilities to reflect the peculiarities of the environment. These results are contrary to what had been anticipated by Morsicato in the outset of the study. When firms were asked whether the internal performance evaluation methods had been modified during the last ten years because of changes which had occurred in a specific environment, only 23 cases (i.e. 33 percent) gave an affirmative response. The changes occurred included general cultural, legal, political, and economic mutations in the subsidiaries' external environment, currency fluctuations, and inflation. The modifications introduced in the evaluation systems included an increase in the use of budgets, the incorporation of environmental changes in the budget, the addition of supplemental information to basic evaluation measures, and the use of subjective evaluations of managers and subsidiaries' operations [pp.92-95]. It is noteworthy that, overall, there was no significant relationship between the operating environment and the U.S. dollar/local currency orientation of the companies [p.144].

Another purpose of the study was to explore the relationship between the organizational structure of the MNCs and the performance evaluation indicators used [see, for example, *ibid* pp.6 and 85]. The organizational structure variable, as it was defined by the author, included the following five categories: functional organization,

Table 6.V - Performance Measures Used by American MNCs for Foreign Subsidiaries, According to Morsicato [1980]

SMALL COMPANIES		MEDIUM COMPANIES		LARGE COMPANIES	
After Translation	Before Translation	After Translation	Before Translation	After Translation	Before Translation
ROI	82	76	Budget compared to actual profits	Budget compared to actual profits	Budget compared to actual profits
Profit	82		82	73	93
Budget compared to actual profits	70	73	ROI		
Profit			77		
Budget compared to actual sales	67	73	Profit	Budget compared to actual sales	Budget compared to actual sales
ROI		67	77	87	73
Cash flow potential from foreign operations	61	42	Cash flow potential from foreign operations	27	80
Return-on-equity	49	39	Budget compared to actual sales	ROI	ROI
Budget compared to actual ROI	36	39	ROI		
Ratios	33	27	Return-on-equity	Cash flow potential from foreign operations	Return-on-equity
Residual income	30	27	Ratios	ROI	Ratios
Others	9	5	Budget compared to actual ROI	67	33
			Others	Cash flow potential from foreign operations	Cash flow potential from foreign operations
			36	40	33
			ROI	ROI	ROI
			27	27	20
			Ratios	Ratios	Others
			9	13	13

NOTE: The table presents percentages which were rounded to the nearest whole number

Source: Morsicato [1980, pp.106-109]

product line, geographic division, international division, and global matrix. The characterization of the internal systems employed by the companies in subsidiary performance evaluation was restricted to only one feature of the systems in operation: the preference for U.S. dollar or local currency information.

The scope of the conclusions reached in this respect are, therefore, very limited. As it had been hypothesized, companies employing the innovative global matrix structure showed a preference for local currency financial information (i.e. a more innovative evaluation technique). On the other hand, firms organized by product line showed a strong preference for U.S. dollar information. Corporations organized by international division and by geographic location also showed a preference for after translation information, although not in a manner as pronounced as the firms organized by product line [pp.96-97]. This was as far as Morsicato went in the investigation of the possible relationships between organizational structure of MNCs and internal performance evaluation techniques. A full characterization of the evaluation systems operated in the companies in the light of the different organizational structures, and indeed of other company characteristics, was not undertaken.

In the second phase of the data collection, i.e. the interview phase, an explanation as to why particular evaluation methods had been adopted instead of alternative methods was attempted by Morsicato. The information gathered is highly interesting because it led to conclusions that are inconsistent with the findings obtained from the questionnaire. Unfortunately, no serious attempt is made in the study to reconcile the findings or explain the reasons for the discrepancies. Besides, the interviews revealed a few significant aspects present in the internal evaluation process which were not adequately explored in the research.

Contrary to what had been determined in the data gathered through the questionnaires, the interviews revealed that environmental factors peculiar to subsidiaries seemed to be highly present in the performance evaluation process. Apparently, the environmental peculiarities were taken into account by allowing a considerable

degree of subjective evaluation to operate within the performance evaluation system. Almost 96 percent of the headquarters managers interviewed admitted that **"hard-core quantitative information"** was employed to assess the operations of the subsidiaries, whereas subsidiaries' managers evaluation tended to rely more on qualitative information. Furthermore, in the majority of the cases the interviews disclosed an explicit effort on the part of headquarters for not holding subsidiary managers responsible or accountable for factors which they could not control. Such factors included the following: host government intervention in regard to wage and price controls, unstable currencies resulting in translation gains or losses, tax rates, interest rates, and transfer prices. According to this, the MNCs seemed to be clearly separating the evaluation of the subsidiary from that of the manager. It was also found from the interviews that a considerable number of companies were employing different criteria to assess the performance of their foreign and domestic operations. In fact, Morsicato reports that when evaluating foreign subsidiaries many firms tended to incorporate in the evaluation system a number of non-financial indicators of performance which they did not use for domestic subsidiaries. Comparison of similar foreign units was also found to involve non-financial measures, such as efficiency and productivity indicators, and growth ratios [pp.98-100; Morsicato and Radebaugh, 1979, pp.89-92].

In summary, although the Morsicato study has adopted a more systematic and rigorous research design than the previous studies here reviewed, the results it achieved as to the characterization of the performance evaluation systems operated in MNCs are, nevertheless, limited and to some extent contradictory. In fact, the analysis of the study findings requires that the results obtained from the mailed questionnaire be distinguished from those drawn from the personal and telephone interviews. From the mailed survey it was concluded that MNCs assessed subsidiaries operations mainly on the basis of a few financial measures, such as absolute profit, ROI, budget, and cash flow potential. The criteria employed for evaluation not only by the small firms (as it had been firstly hypothesized) but also by the medium and large companies, were found basically to be the same for domestic and foreign units. It was also found that no significant

distinction between subsidiary and manager evaluation methods was made either by the small, medium, or large corporations. In the part of the study dealing with the influence of the subsidiary external environment on the design of the internal evaluation system, the author concludes that:

"In general, the firms [were] not designing performance evaluation systems that recognized environmental differences. Neither the size of the firms nor the particular geographic operating environment affected the firm's policy of designing the system of performance evaluation to reflect environmental differences."

[Morsicato, 1980, p.143]

As to the interview survey, two different approaches to performance evaluation were, in general, identified. One, was an inflexible attitude with well defined assessment policies to be used worldwide without exception. The other, was a flexible attitude established by subjectively taking into account the important characteristics of each geographic area. As Morsicato recognizes, both approaches tended to be present in MNCs, with different combinations of the two incorporated into the operations [Morsicato and Diamond, 1980, p.254]. The presence of such subjective aspects in performance evaluation was overlooked in the questionnaire study and only came into light in the interview phase. Also, other conclusions drawn from the interviews were found to be incongruous with those reached from the questionnaire survey. The reasons for this were not explained by the author, and are difficult to ascertain. They may be due to interview selection criteria bias, questionnaire rigidity, or some other reason.

Two important aspects, at least, seem to be suggested by the study. First, any attempt to understand how subsidiaries and managers of MNCs are evaluated, should not be limited to the description of the main financial measures used by headquarters in the evaluation process. Instead, a wider characterization of the flow of information, both financial and non-financial, circulated between subsidiaries and parent company, and of the ways in which such information is incorporated in the assessment process should be undertaken. Second, behind the apparent objectivity of any particular performance evaluation system, there is most likely a subjective and informal

component in the evaluation process which attempts to overcome many of the limitations and difficulties raised by formal criteria of performance evaluation.

6.2.7. The Choi, Czechowicz and Bavishi Study

Recently, a survey conducted by Business International provided additional evidence on the success indicators used in performance evaluation and control of foreign subsidiaries. The results of this survey were published in Choi, Czechowicz and Bavishi [1982], and in Choi and Czechowicz [1983], the latter being an article where the main findings of the survey are summarized.

The study differs from previous ones, in that it covers MNCs based in the U.S. and Europe, namely in Sweden, U.K., Switzerland and other non-disclosed countries. The data were gathered from a questionnaire and from personal and telephone interviews. The questionnaire was mailed to 300 corporations, having 88 replies been received, a response rate of 29 percent. Of the companies participating 64 were U.S.-based and 24 European.

The main criticism to this study lies in the fact that the results presented are merely descriptive, and no attempt was made to determine statistically whether there were differences in practices between U.S. and non-U.S. MNCs. Similarly, no efforts were spent to interpret companies' practices in the light of independent variables reflecting major corporate characteristics such as size, or degree of multinationality.

Results of the survey with relevance to the present study include the description of the performance criteria used by headquarters in the assessment of foreign units and managers. In contrast to most previous studies which concentrated on assessment criteria of a financial nature, the Business International survey explicitly considered both financial and non-financial criteria. The most important financial indicators used to evaluate the performance of

foreign units in U.S.-based MNCs were found to be budget compared to actual profit, and ROI (see Table 6.VI). In European MNCs the most important financial indicators were budget compared to actual profit, budget compared to actual sales, and return on sales. ROI only comes fourth in the list of importance, which points to a smaller emphasis on the measure in European than in American corporations. As regards the assessment of overseas subsidiary managers, the financial criteria considered most important by both categories of MNCs were budget compared to actual profit, budget compared to actual sales, and return on sales. As the results appear to indicate (see Table 6.VI), ROI plays a less important role in the assessment of managers than in the evaluation of units. Despite this difference, the authors concluded that most firms use essentially the same financial measures to evaluate both unit and managerial performance (Choi, Czechowicz and Bavishi, 1982, ch.3). This finding confirms the results encountered in the studies previously reviewed.

In what concerns the use of non-financial criteria, Table 6.VI shows that these measures are consistently considered more important for managers than for units. It is noteworthy, however, that even for the evaluation of units non-financial measures were accorded high levels of importance. The most relevant indicators for both American and European MNCs were market share, productivity, relationship with host country government, and quality control.

Like other studies, the Business International survey also concluded that in the overwhelming majority of cases the financial and non-financial criteria used to evaluate foreign operations did not differ in an important way from those used to evaluate domestic operations. Here, as in previous studies, it was concluded that, apparently, **"basic domestic measures of performance were extended for use internationally, although there will be modifications for handling uniquely international factors such as exchange gains and losses"** [Choi, Czechowicz, and Bavishi, 1982, p.24].

After determining which measures of performance are employed by headquarters, the study turned to an analysis of how standards of performance are set. The most commonly used standard was by far the

**Table 6.VI - Performance Criteria Used in U.S. and European MNCs,
According to Choi, Czechowicz and Bavishi [1982]**

(Averages *)

ITEMS	American MNCs N = 64		European MNCs N = 24	
	Evaluation of the: Unit Manager		Evaluation of the: Unit Manager	
FINANCIAL:				
ROI	1.8	2.2	2.1	2.2
Return on sales	2.2	2.1	1.9	2.1
Contribution to earnings per share	2.8	3.2	3.5	3.4
Operating cash flow to subsidiary	2.5	2.7	2.2	2.5
Operating cash flow to parent/(remittances)	2.3	2.8	2.5	2.6
RI	3.4	3.3	3.4	3.2
Budget compared to actual sales	2.0	1.6	1.9	1.8
Budget compared to actual profit	1.5	1.4	1.4	1.3
Budget compared to actual ROI	2.3	2.4	2.4	2.5
NON-FINANCIAL:				
Market share	1.8	1.5	1.7	1.6
Quality control	2.2	1.9	2.4	2.0
Relationship with host country government	2.1	1.8	2.4	1.9
Employee development	2.4	2.0	2.4	2.2
R&D in foreign unit	3.1	3.2	2.8	2.7
Productivity	2.2	2.1	1.7	1.6
Employee safety	2.4	2.2	2.2	2.3
Community service	2.9	2.8	2.8	2.5

NOTE: * Averages were based on the scores given in accordance to the following scale: 1(most important), 2(important), 3(less important), and 4(not used).

Source: Adapted from Choi, Czechowicz and Bavishi [1982, pp.161-162]

subsidiary budget or plan, followed by historical performance of the unit [ibid., ch.8]. This result applies both to U.S. and non-U.S. firms, and equally to the evaluation of subsidiaries and managers. The authors tried to ascertain whether certain environmental characteristics of the host countries were taken into account in the setting of performance standards. The characteristics chosen were political risk and inflation. As regards the former, only a minority (approximately 40 percent of U.S. and European companies) either required a higher rate of return for high risk countries, or incorporated the level of political risk into budget projections [p.75]. The majority of firms, in reality, did not consider the degree of country risk in performance evaluation. As far as inflation is concerned, a very important difference was found between U.S. and European MNCs. Whereas only 16 percent of the American firms indicated that they made adjustments for inflation in their foreign subsidiaries' targets, the majority of European companies (54 percent) revealed that they normally did such adjustments [p.51].

The analysis of the environmental differences encountered across the companies foreign operations was taken further by an attempt to identify which local problems associated with overseas performance evaluation were considered more significant by managers in headquarters. Responses from both U.S. and non-U.S. multinationals were very similar. In general, environmental factors were considered more problematic in less-developed than in developed countries. Government regulations (such as price control and minimum capitalization ratios), as well as local business customs (personnel policies, collection periods) were considered the most difficult environmental elements in the developed nations. In the developing world, factors like time delays in information generation, lack of local accounting expertise, and different concepts of control were viewed as the most troublesome in addition to those indicated for the developed countries [p.66].

Faced with the identification of these relevant environmental problems, the respondents were then asked whether their firms' internal evaluation systems took into account various social, economic, legal, and political differences that characterize foreign

operations. The great majority of companies (64 percent of U.S. and 58 percent of European MNCs) conceded that relevant environmental differences were not considered when evaluating overseas subsidiaries. Although of undeniable interest, this result does not provide, however, safe conclusions as to the degree of environmental sensitivity of the performance evaluation systems in operation in MNCs. In effect, what this result shows is the opinion of questionnaire respondents reflecting their perceptions relative to the ability of the systems to consider environmental factors, and not an independent assessment made on the basis of the intrinsic characteristics of the systems themselves.

In summary, the Business International study confirmed many of the findings reported in previous surveys, namely the tendency for companies to utilize essentially the same measures to evaluate both subsidiary and managerial performance, the tendency to export overseas the assessment criteria used domestically, and the generalized opinion among executives that the evaluation systems operated do not take into account environmental differences. An innovation of the study was that multinationals of different origin were subject to analysis. In fact, not only MNCs from the U.S. but also companies originating from Europe were included in the survey. However, the full potential from such a design was not realized due to the fact that the authors failed to use statistical techniques to infer significant differences between the two types of MNCs. Another criticism is that no attempt was made to associate companies' practices with explanatory variables deriving from major corporate characteristics. In reality, the study is of a mere descriptive nature and so no inferences from the data collected were provided.

An interesting result calling for statistical confirmation was that many more European than American MNCs appeared to account for local inflation in setting subsidiary targets. This finding is not sufficient to infer the extent to which companies both in the U.S. and Europe take into account relevant environmental characteristics in their internal evaluation systems. In effect, the reactions of the evaluation systems in operation would have to be tested against a wider range of environmental factors for a better understanding of the

issue to emerge. Although not providing answers for questions of major interest to the present research work, the Choi, Czechowicz and Bavishi study, nevertheless, supplemented the knowledge of multinationals' practices domiciled in the U.S. with those of MNCs from Europe. Besides, the study appears vaguely to suggest that non-U.S. companies would perhaps be more predisposed to account for environmental differences in foreign subsidiary performance evaluation than American MNCs.

6.2.8. The Yunker Study

By the time Choi, Czechowicz and Bavishi were carrying out their survey, another study reviewing the performance evaluation practices in U.S.-based MNCs was conducted by Penelope Yunker as part of her doctoral work. A book [Yunker, 1982], and an article [Yunker, 1983] were published out of this research. The study is not concerned with foreign subsidiary performance evaluation as such, but with the relationships between performance evaluation and transfer pricing policies. In this context, performance evaluation practices were investigated only to the extent that they would be relevant to better understanding of transfer pricing. Given this, Yunker's study is not entirely comparable with the studies reviewed previously (6), but even so it has been included here since it brings some relevant findings to the existing body of empirical evidence on foreign subsidiary performance evaluation.

Yunker's research was based on data collected from a questionnaire administered to the 358 corporations on the "Fortune 500" list which have international operations. Response rate was a disappointing 14.5 percent, for a total of 52 usable questionnaires received. Follow-up personal interviews were not conducted. The questionnaire, which was relatively small in size and very schematic in presentation, covered three main policy areas: transfer pricing, performance evaluation, and subsidiary autonomy (decentralization). A large number of company characteristics was also included in the questionnaire; these represent the study's independent or explanatory variables, and cover

a wide range of features such as sales (total and foreign), number of employees, number of subsidiaries, number of countries, business objectives (e.g. profit, growth in sales, employment stability, new product development), and, most important, perception of environmental influence on subsidiaries results [1982, pp.68-78].

The analysis of data from the survey made an extensive use of inferential statistical techniques. However, the selection of the specific instruments employed does not seem to have been the most adequate. In fact, Yunker appears to have disregarded the levels of measurement at which the variables of the study were placed, and as a consequence parametric statistics (like regression analysis) were employed throughout the study to variables which were, at best, at the ordinal level. In addition, the study findings widely emphasize causal relationships between company characteristics and company policies in the three areas under investigation. The difficulties associated with the demonstration of causality in studies of this type are well known [e.g. Kidder, 1981, ch.4], and considerable caution must be taken when interpreting results. Let alone the distortions that may have been introduced by applying parametric statistics to variables at a low level of measurement, the study fails to draw sufficient attention of the reader to the extreme care required in the interpretation of causal links in the findings.

The report on some of the practices adopted by companies in the evaluation of their operations was done in the study by enunciating first the general principles put forward by firms in their evaluation systems, and by describing next the specific performance measures employed in the assessment process [1982, pp.104-111]. Table 6.VII presents the perceptions of respondents as to the degree of importance of each principle and each measure. As regards the general principles of evaluation adopted by companies, the study found a preference for financial indicators expressed in U.S. dollars as opposed to those expressed in local currency. Both types of indicators were regarded as highly important, but one was, however, rated considerably higher than the other. The study also found that the tailoring of standards to specific circumstances in subsidiaries was considered more important than any other method used in setting subsidiary performance

Table 6.VII - General Principles and Specific Measures Used in Performance Evaluation, According to Yunker [1982]

(% of total number of respondents: 52)

	Degree of importance				Mean
	Very	Some	Minor	None	
General Principles:					
Financial measures expressed in U.S. dollars	67	21	10	2	2.538
Financial measures expressed in local currency	40	35	17	8	2.077
Standards tailored to specific circumstances	27	44	21	8	1.904
Standards set by company-wide performance	31	38	15	15	1.846
Standards set by economy-wide performance	6	44	38	12	1.442
Standards set by industry-wide performance	4	50	25	21	1.365
Specific Measures:					
General -					
Meeting plan goals	63	33	4	0	2.596
Adherence to budgets	62	29	8	2	2.500
Profit based -					
Net income (profits)	58	29	6	8	2.365
Ratio of profits to total assets	52	31	12	6	2.288
Ratio of profits to sales	44	40	13	2	2.269
Ratio of profits to equity	33	27	23	17	1.750
Residual income (profits after capital charge)	19	27	25	29	1.365
Remittances to parent company	12	27	40	21	1.288
Non profit based -					
Sales growth	54	35	8	4	2.385
Cost reduction	46	44	10	0	2.365
Market share	44	42	8	6	2.250
Production/technological innovation	27	44	21	8	1.904
New product innovation	25	50	17	8	1.923

Source: Adapted from Yunker [1982, p.105]

standards. As far as the specific performance measures are concerned, it is noteworthy that while profit-based indicators were generally rated as important, non-profit-based criteria were considered at least as important. The most highly rated indicators were the meeting of plan goals, adherence to budgets, and sales growth; other non-profit measures like cost reduction and market share were also rated high. Among the profit-based indicators net income, ROI and return on sales were attributed the highest importance (see Table 6.VII).

The fact that companies valued more highly standards tailored to specific circumstances than other company-wide criteria of standard setting seems to indicate that an attempt was being made to account for the environmental factors that are likely to vary considerably among subsidiaries. The study collected information concerning the perceptions of managers as regards the effects of unforeseen changes in a number of environmental factors on subsidiaries' results. The factors thought generally to produce the highest impact on results were by descending order overall demand, government regulations, raw materials and labour costs, level of competition, and inflation and exchange rates [ibid., p.77]. Perception of environmental impact was found to be significantly associated with some performance evaluation criteria. This association was positive in all cases and shows that respondents who generally perceived the impact of foreign varying environments on subsidiaries' results as high, tended simultaneously to perceive high levels of importance for the measures used in the evaluation of such results, whatever their nature might be: profit- or non-profit-based [p.107].

As mentioned before, the Yunker study also collected information on the level of subsidiary autonomy by measuring the degree of independence of subsidiary managers with respect to a number of policy decisions, such as amount of physical output, pricing, capital investment, borrowing, and R&D expenditure. It was hypothesized that as more autonomy was granted to the subsidiaries, the tighter the performance evaluation standards would be in order to maintain control [1983, p.121]. Analysis of the data did not suggest this relationship, however. The study shows, nevertheless, a significant association between degree of subsidiary autonomy and emphasis on cost

reduction in the evaluation of subsidiary performance by headquarters. Such an association was found to be negative, suggesting that concentration on costs as a measure of performance tended to happen in those companies where subsidiaries were highly dependent on parent decision making (i.e. subsidiaries with low levels of autonomy). The interpretation of this result is difficult due to the lack of appropriate information. However, it could be argued that companies where policy decisions are fairly centralized in headquarters would tend to adopt a more global view of their international operations, which would result in a smaller emphasis on evaluation criteria based on profit, and, simultaneously, in a greater stress on cost-reduction criteria.

In conclusion, the Yunker study, although having only superficially collected information on evaluation practices in MNCs, achieved some interesting findings which add to the available body of empirical evidence. At a descriptive level, the study confirmed the extreme importance attributed to planned goals and the budget in assessing subsidiary performance. Non-profit-based measures of performance like sales growth and cost reduction were considered at least as important as the more familiar indicators of net income and ROI. As regards the standards set for subsidiaries, the study revealed a preference for targets which were tailored to specific circumstances in subsidiaries, as opposed to targets set according to some company- or industry-wide rule. The logic implication is that many MNCs were making an effort to take environmental influences that vary among foreign subsidiaries into account in the setting of performance standards.

Conclusions reached in Yunker's study concerning relationships among variables require careful interpretation due to a less rigorous statistical approach that was employed throughout the work. Some noteworthy findings reported above include a direct relationship encountered between the level of impact perceived by respondents to be exerted by varying foreign environments on subsidiaries and the level of importance attributed to the measures of performance used in the control of those subsidiaries. Another finding consisted in that emphasis on cost in performance evaluation seemed to be associated with companies whose subsidiaries had little autonomy from

headquarters, policy decision making (i.e. decisions regarding production output, sales prices, capital investments, marketing expenditures, R&D, etc). This is a major contribution of Yunker's study to the present research since it suggests that the level of strategic control exercised by headquarters over subsidiaries has some implication in the criteria utilized in the evaluation and control of subsidiary performance.

6.3. Summary and Conclusions

The review of the empirical evidence on the practices followed by MNCs in the evaluation and control of foreign subsidiary performance was the object of the present chapter.

All the studies analysed examine in considerable detail the assessment techniques used by parent companies in the monitoring of their overseas operations. They all emphasize the importance given to financial measures, mainly profit-based, which seem to be in most cases the only type of indicators of performance used by companies. Multiple performance evaluation criteria with a diversified number of indicators are generally employed, and ROI appears to be the clear leader in the preferences of companies for a comprehensive measure which encapsulates the performance of an operation. Some of the more recent studies, however, reported that non-profit-based financial measures, as well as non-financial indicators are also extremely important for most companies. Cash flow, asset/liability management, sales growth, cost control, and also market share, quality controls, product innovation, etc. were usually found to be at least as important for subsidiary performance evaluation as the more traditional financial measures. Whether or not such findings are due to an emergence of non-profit-based techniques in recent years cannot be ascertained, since most previous studies have simply ignored non-financial methods of performance appraisal in their design. What seems clear from this recent evidence is that any study which proposes

to investigate in a reasonably comprehensive manner the criteria used in the evaluation of subsidiary performance, can no longer overlook those assessment techniques that are of a non-financial nature.

A result on which all studies agree is the crucial role played by the budget in subsidiary performance evaluation. The budget, which is perhaps the most versatile technique used in the evaluation process, lies usually in the origin of the assignment of performance targets to subsidiaries. Such targets become a basis of comparison for actual results, and represent in turn a major object of assessment.

Another important finding obtained in studies which investigated both the performance of subsidiary operations and the performance of subsidiary managers was that in most of the cases no relevant differences were found between the evaluation practices used for subsidiaries and for managers. The review process of overseas operations for control purposes provides information which is normally used by headquarters executives to judge the performance and the capabilities of overseas managements. Likewise, the same or very similar practices tend to be found in the control and evaluation of foreign and domestic operations, despite the differences that clearly exist between operating at home and abroad.

These findings raise the question of how are MNCs being able to cope with the diversity of conditions present in their international spectrum of operations for purposes of subsidiary control and evaluation. Some studies have addressed this problem, although not as the main purpose of the investigation. Evidence collected is generally superficial, and findings are in some cases puzzling. Nevertheless, they provide the only information that is available on the issue and represent a valuable starting point for the understanding of the ways in which environmental differences across subsidiaries are accommodated in the performance evaluation process. From an objective analysis of the assessment criteria employed in companies, it appears that systems of internal performance evaluation are not designed to reflect environmental differences that vary from one geographic region to another. Consonant with this finding, as reported by two of the studies, are the opinions of headquarters

executives who tended to consider that the internal systems in operation in their firms had been designed to include environmental differences less than moderately. However, the same executives tended to feel the need for the systems to reflect such environmental differences in a moderate to high degree. In effect, the apparent unsensitivity of evaluation systems to environmental differences does not appear to be the result of an unawareness on the part of headquarters executives of the necessity of influences exerted by local environments on subsidiaries being taken into account in the assessment of subsidiary results. Several studies report that executives in parent companies perceive the impact of local environments on operations as a relevant factor to be taken into consideration. Factors regarded as producing the highest influences on results include government regulations and controls, local demand, level of competition, materials and labour costs, currency fluctuations, and inflation rates.

The situation just described suggests the existence of a gap between the objective characteristics found for the performance evaluation systems operated in practice and the characteristics that such systems should ideally possess, in the opinion of executives involved in the subsidiary evaluation process. Some dimensions of performance evaluation, which the studies above only marginally explored, could provide a vital contribution to the filling of such a gap. One aspect worth of mention is the process followed by companies in the setting up of subsidiary standards. Differences among subsidiaries operating in various environments can be considered through the setting of different standards of performance, adapted to the realities of local conditions. The budgeting process, for example, has the capability of taking the specificity of each operation into account if the setting of targets to be achieved by subsidiaries enables such specificity to be incorporated in the budget. Another aspect whose contribution can be vital to the bridging of the gap described above is the existence of an informal dimension of assessment. One study discovered that contrary to what had been concluded from the analysis of the objective criteria employed, environmental influences seemed to be adequately taken into account by allowing a considerable degree of subjective evaluation to operate within the formal performance evaluation system.

This study also reported that subsidiary and managerial performance assessment seemed to be based on different subjective criteria. Also different informal criteria appeared to be used in the control of foreign and domestic operations. This demonstrates how important for the understanding of subsidiary performance evaluation are dimensions usually insufficiently explored by studies in the area, notably the mechanisms employed in setting-up subsidiary standards, and the informal information used in the assessment of operations and managers.

Some of the studies reviewed in the chapter analysed practices of performance evaluation in the light of a number of corporate characteristics, which were expected somehow to explain differences in practices encountered across companies. A number of such independent variables were suggested to have some influence in the criteria actually employed by firms in the evaluation of foreign subsidiaries. These variables, namely company size (measured in terms of overseas sales), organizational structure, perception of environmental impact on subsidiaries, and level of subsidiary autonomy in business policy decisions, together with others suggested by the literature, and reviewed in previous chapters, are important explanatory elements which should be included in any study of subsidiary performance evaluation proposing to use inferential statistical techniques.

Footnotes:

- (1) Although Tomkins [1973], and Scapens and Sale [1981, 1985] have reported on the performance evaluation practices of British divisionalized companies, they were not concerned with the specific case of the MNC. Consequently, the findings of these studies do not account for possible differences between the evaluation criteria employed by the corporations for their domestic and foreign units.
- (2) These are among an universe of 98 companies having members in the Financial Executives Institute, all of which were circularized. Nothing is said in the study about the demographic characteristics of such a population, neither how they compare with the demographic characteristics of the set constituted by all American multinationals.
- (3) The results of the study are communicated only in percentage form. No absolute figures are provided by the authors, which is the reason why a tabulation of the responses cannot be presented here.
- (4) Persen and Van Lessig do not reveal in the study the exact number of companies circularized. They also fail to describe the data base from which the sample companies were selected, as well as the selection criteria adopted.
- (5) As the authors report, companies were asked to provide information **"on their approach in terms of their European operations"** [p.6].
- (6) Two other factors may add to the difficulties in comparing the findings of this study with the previous research efforts. One, is that the questionnaire collects information only about the criteria used in the performance evaluation of subsidiary managers. The other, is that questions relate to practices followed not only for overseas subsidiaries, but also for domestic subsidiaries engaged in international transfers.

PART II

RESEARCH APPROACH AND DESIGN

CHAPTER 7 - THE RESEARCH FRAMEWORK

7.1. Introduction

The present Part II is intended to act as a hinge between two fundamental blocks of the study. One, that was built throughout Part I, introduced the theoretical foundations of the research. The other, the forthcoming Part III, will offer the empirical results and conclusions. This chapter will formulate the main problem to be investigated and will present a model of foreign subsidiary performance evaluation and control that operationalizes the theoretical concepts and issues previously reviewed. Also, the main hypotheses of the study will be formulated with particular reference to the theoretical background. Such hypotheses will be empirically tested later, with the application of a certain methodological approach that will be defined in the chapter.

7.2. The Research Problem

The present research addresses the environmental issue in the foreign subsidiary performance evaluation and control process that takes place in MNCs. Earlier in chapter 4 (section 4.3.3.) it was demonstrated that the consideration of the environmental specificity of each subsidiary is vital for the achievement of a competent and effective assessment of subsidiaries and their managers.

Two main reasons justify the need for the environment to be taken into account in the evaluation of overseas operations. One, is related to the application of the concept of responsibility accounting on which any process of subunit performance appraisal is based. An important

premise of the responsibility accounting principle is that inputs and outputs to and from subunits are, for a given time span, under the effective authority and control of the managers responsible for the subunits. Such a principle of authority and controllability is misapplied if the consequences of the impact of the foreign host environments on subsidiaries' operations are overlooked. Chapters 2 and 3 of the theoretical foundations of the study demonstrated that each host environment where a MNC conducts activities is likely to possess a particular set of characteristics which directly affect subsidiaries' operations. A whole host of local conditions of an economic nature (for example, market size, inflation and exchange rates, and cost of production inputs), legal nature (such as the labour law, exchange controls, taxes, and import-export controls), and social/cultural nature (e.g. language, attitudes relative to work and personal achievement, religion, and quality of labour relations) exert an influence on a subsidiary's performance, and only to a very reduced extent can be modified by the subsidiary's management. Therefore, in order that a fair evaluation of the managers responsible for a subsidiary may be achieved, and also in order that the full potential of the subsidiary may be comprehended, the criteria used in headquarters to judge the performance of the foreign operation should be able to recognize those environmental features that are particular to the host location and that impact on the subsidiary in a relevant way.

The other main reason justifying environmental consideration in the performance evaluation and control of foreign subsidiaries, stems from the vulnerability of certain MNCs to sudden changes in the characteristics of the environments. As extensively discussed in chapter 3 (section 3.3.2.) companies that operate at an international scale are subject to often conflicting economic and political imperatives that influence the organization of the overall pattern of corporate activities via the implementation of a strategy particularly designed to cope with such pressures. Strategies that favour a global integration of international activities give priority to the economic pressures for unification of operations at a multi-country level. Such global strategies involve the centralization of decision making and the setting up of a coherent and highly integrated network of mutual

relationships across subsidiaries. Indeed, it was argued in chapter 3 that behind the global integration strategy lies a view of the MNC as a system of well-articulated and multi-dependent parts that largely transcend national borders. In such a close tight matrix of relationships the failure of a single subsidiary of a multinational is enough to seriously jeopardize the whole company. This being so, the understanding of the dynamic characteristics of the host environments operated and of how they impinge on the performance of the subsidiaries becomes vital as a means of anticipating future changes that may seriously affect operations.

On the other hand, there may be companies for which the political imperatives are so paramount that they override any possibility of responding to economic pressures that would enable the exploration of scale economies, for example. Such companies will probably respond to these political forces for fragmentation with segmented nation-for-nation strategies. This is the case of multinationals in industries where local governments play a key role such as telecommunications, heavy engineering, mining, and agriculture. In fact, MNCs whose products are of strategic importance to host countries or whose major international customers are national governments or state owned enterprises are subject to high levels of exposure to local influence. In these cases, the evaluation and control of subsidiaries also especially require that the conditions in host environments are monitored and understood.

Having presented the rationale for the consideration of the environment in subsidiary performance evaluation, the study now asks its major empirical question:

How and to which extent are external environmental influences on foreign operations taken into account in the performance evaluation and control systems used in MNCs for subsidiaries and subsidiaries' managers?

In connection with this enquiry, another important research question is suggested:

Which major characteristics of the MNCs are related to the degree to which the performance evaluation and control systems in operation take the environment into account?

The empirical evidence available relative to the subsidiary performance evaluation criteria used in multinationals does not give satisfactory answers to these questions. In fact, the studies reviewed in chapter 6 only marginally addressed the environmental issue, no conclusive evidence having been provided as to the way in which overseas host environments are taken into consideration in the evaluation of subsidiary and managerial performance. Besides, such studies have all dealt with U.S.-based MNCs and there is reason to believe that European multinationals, and in particular U.K.-based MNCs, employ methods and practices that are different from those used by American companies.

An operational model of the research articulating the main issues that will be object of analysis is presented next. There, a definition of the descriptive information to be collected in the study will be made. It is hoped that such information together with the conclusions reached in the testing of hypotheses will represent a relevant contribution to the knowledge in the area, and provide valuable directions for the practice.

7.3. Operational Model

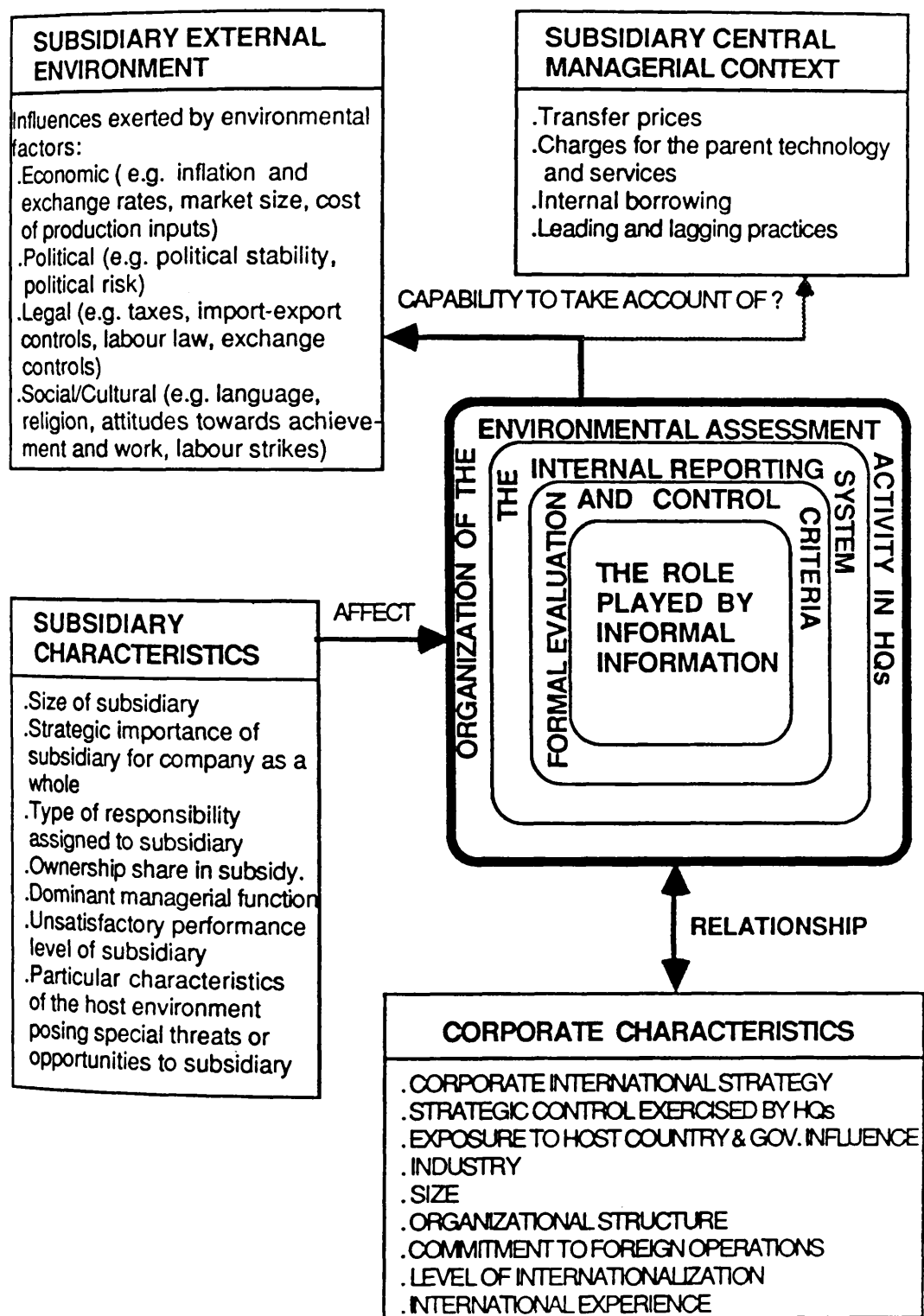
The formulation of the research problem above raised a number of issues that the present study proposes to examine. Exhibit 7.I presents a comprehensive model of foreign subsidiary performance evaluation and control, which attempts to equate such issues with the main object of the study. The model is intended to provide an operational approach that is expected to guide the formulation of hypotheses and the overall design of the research.

Basically, the model reflects a major concern in subunit performance evaluation which consists in determining the extent and the way in which uncontrollable factors are taken into account by MNCs in the assessment and control of subsidiaries operating abroad. In fact, as it was seen, a crucial issue in performance evaluation is whether the principle of authority and controllability is correctly applied. As discussed in chapter 4, two very different sets of factors normally beyond the direct control of subsidiary management affect the results of organizational subunits. One is the subsidiary external environment, with its particular economic, political, legal, social, and cultural characteristics. The other is what may be termed the subsidiary central managerial context, comprising all the decisions imposed by headquarters on subunits, and likely to influence their performance. Examples include transfer prices, charges for the parent technology and services, valuation of fixed assets, internal borrowing, and leading and lagging practices in accounts receivable and payable. The present study only focuses on the former, since it would be impractical to include in the research both sets of factors. Since the two issues represent facets of the same problem that are, however, inherently distinct, it is believed that the concentration on one with the exclusion of the other is conceptually acceptable.

In order to answer the major research questions raised in the previous section the study will have to examine in detail the characteristics of the evaluation criteria in operation in multinationals. Indeed, in the centre of the model presented in Exhibit 7.I lies the performance and control system that is used in MNCs for foreign subsidiaries and managers. Such a system is seen, for the purposes of the study, as involving a number of aspects which will be analysed separately in the empirical stage of the research.

The aspect to examine first, is the way in which the collection and analysis of foreign environmental information is organized in companies' headquarters. This outer shell in the exhibit, although not necessarily linked in a direct way to the criteria of performance assessment, is believed to be important to the understanding of the environmental issue in subsidiary evaluation and control. As seen in chapter 3 (section 3.4.), environmental scanning is regarded as vital

Exhibit 7.I - An Operational Model of Foreign Subsidiary Performance Evaluation and Control



for an adequate fit between an organization and its external environment, from which the long term success of the organization will depend. In MNCs where the degree of environmental variation is high, the scanning of host environments generally constitutes an activity of critical relevance, with possible implications in the subsidiary evaluation process.

Another aspect to examine is the formal reporting system internally set up between foreign subsidiaries and headquarters. Chapter 4 (section 4.3.), emphasized the fact that the exercise of formal control in an organization is essentially based on information provided by the channels of communication institutionalized within corporations. It was noted there that the internal reporting system was a "connective tissue" linking all parts of an organization and enabling the exercise of evaluation and control over such parts. The design of a reporting system can be described in terms of content, frequency of reporting, and degree of standardization. These characteristics will be analysed for the internal reporting system in operation in each of the companies to be included in the study.

The third aspect to examine, as suggested in the model, encompasses the review of the formal criteria used in the assessment of subsidiaries and managers. These criteria are seen to be based on the data that are provided by the internal reporting system, and comprise the items of information regularly forwarded by subsidiaries, performance success indicators, and standards. Chapter 5 presented a conceptual discussion of the most common measures and standards of performance, which was complemented by a review in chapter 6 of the empirical evidence available from previous studies. It is expected that the descriptive data collected in the present research may be compared with the evidence so far available, and conclusions may be drawn as to the practices of U.K.-based multinationals.

Finally, an aspect that should not be overlooked is related to the informal evaluation and control process. In effect, a thorough understanding of subsidiary performance evaluation requires that informal criteria of assessment are examined. Such criteria are based on information that is gathered through non-official channels of

communication, and so constitute a framework of analysis that is parallel to the evaluation process generated from the formal internal reporting system.

After achieving a comprehension of the characteristics of the control and evaluation systems through the description of companies' practices, reasons will be explored that may justify the use of certain methods and criteria adopted instead of others. The model in Exhibit 7.I. suggests the existence of a relationship between the characteristics of the systems in operation, and consequently their capability to take the subsidiary host environments into account, and a number of corporate features. These, have been suggested throughout Part I of the study to be able to act as explanatory variables for the present research. Such corporate characteristics include the strategic organization of the international industrial operations of a company (i.e. global integration, segmented nation-for-nation, and mixed strategies), the level of strategic control exercised by headquarters, the level of exposure to host country and government influence, the industry and size of the company, its organizational structure, its commitment to foreign operations, level of internationalization, and international experience. The concrete definition of these variables, and the criteria employed for their measurement will be presented later in chapter 9.

An aspect contemplated in the model which may create certain problems in the design of the research consists in that the features inherent to subsidiaries are seen possibly to affect the characteristics of the control and evaluation systems (see Exhibit 7.I). In reality, features such as the size of a subsidiary, its strategic importance for the multinational as a whole, the type of responsibility assigned (e.g. profit centre, cost centre), the ownership share in the subsidiary, its dominant managerial function (e.g. marketing, production), the unsatisfactory performance level of the subsidiary, and the particular characteristics of the host environments posing special threats and/or opportunities to the subsidiary, all may contribute to the choice of evaluation criteria for a particular subsidiary that may differ from the criteria used for other subsidiaries of a same company. This problem will be resolved by focusing on the practices employed by

corporations for their typical (i.e. most common) subsidiary. Nevertheless, a measure of the extent of variability of the performance evaluation criteria employed across the international operations of each MNC will be attempted to be determined in the study.

Having presented a model that operationalizes the issues conceptualized in this research, the next section will explore the relationships among them and formulate the main hypotheses of the study.

7.4. The Research Hypotheses

Besides the contribution to knowledge expected from the descriptive side of the study, also relationships between companies' practices and major corporate characteristics will be explored in order to ascertain the profile of companies that employ certain methods and criteria in the evaluation of foreign subsidiary performance. In this section, hypotheses stated in the form of anticipated results will be formulated, having as their foundation the literature reviewed in Part I of the study.

Before examining which criteria are employed in MNCs to assess foreign operations, and how such criteria take into account differing environmental influences across host countries, the study will address the issue of the environmental assessment activity conducted in the companies' headquarters. This, in fact, reflects the sequence of analysis proposed in the operational model presented in the previous section.

The way in which the environmental scanning activity is centrally organized in companies may vary widely in terms of formality and sophistication. A number of surveys, all based on U.S. multinationals, are known to have studied the organization of the environmental

assessment activity (chapter 3). The findings of such surveys appear to suggest that over the years there has been an increasing number of companies institutionalizing the activity in a formal function, and introducing methods that have achieved considerable levels of refinement. Recent studies by Kobrin et al. [1980], and Kennedy [1984], discovered that multinationals that were larger in size, more international, and more vulnerable to environmental impacts were more likely to have a formal environmental assessment function.

It is hypothesized, in the present study that a formal function of environmental assessment will be encountered in organizations for which the monitoring of the environment is especially vital (e.g. companies with global integration strategies, high levels of exposure to host countries, a high commitment to foreign operations, and a tight strategic control over subsidiaries), or which are subject to higher degrees of variation in the subsidiary environments (e.g. companies with high levels of internationalization), or still whose size, structure or experience favour the utilization of sophisticated organizational techniques, as a formalized function of environmental assessment appears to be. In other words, the study anticipates that MNCs where the collection and analysis of foreign environmental information is formally institutionalized, and, to a smaller extent, companies where the environmental assessment activity is conducted in an informal way, will tend 1) to operate in industries that are more vulnerable to changes in the host environments, such as agriculture, mining, and oil; 2) to be larger in size; 3) to have higher levels of commitment to foreign operations; 4) to be more internationalized; 5) to possess larger international experience; 6) to have more internationally oriented organizational structures, such as a structure by international division, or by geographic areas in overseas markets; 7) to be more exposed to host country and government influences; 8) to exercise higher levels of strategic control over subsidiaries; and, finally, 9) to practise strategies of global integration of industrial activities.

After exploring the organizational context of the environmental assessment activity, the study will concentrate on the evaluation and control process of foreign subsidiaries. A thorough examination of

the performance evaluation process should encompass an analysis made in advance of the characteristics of the internal reporting systems operated between subsidiaries and headquarters. The scarce empirical evidence available as regards the design of the internal reporting system in MNCs shows that the magnitude of reporting and the nature of the information submitted vary extensively across companies (chapter 4). In the present study an explanation for such a variation will be attempted, by determining which factors are associated with differing volumes and characteristics of the information regularly reported.

It is hypothesized that companies of larger size, internationalization and experience, together with corporations with more elaborate organizational and managerial processes (firms with, for example, more complex organizational structures such as the matrix structure, tighter strategic control over foreign subsidiaries, and global integration strategies) will require higher volumes of information reported by foreign subsidiaries, and will be more selective in the nature of the information requested. Operational hypotheses will be formulated by relating the magnitude and nature of reporting to the nine major corporate characteristics that were selected for the independent variables of the study.

Included in the internal reporting systems of multinationals, as revealed by Leksell [1981], are formal reports on economic and non-economic environmental conditions encountered in host countries. It was also found by Leksell that the companies which had local environmental information regularly reported from subsidiaries presented high degrees of host country dependence, and a high intra-organizational interdependence (see chapter 4). Assuming that in the descriptive stage of the present study, a sufficient number of companies formally reporting environmental information is found, an attempt will be made to determine which kind of corporation has environmental information included in the formal reporting system.

It is anticipated that those companies which have economic, and non-economic (i.e. political, legal, and social) environmental information frequently reported in the formal communication system will present high levels of exposure to host country influences, and a global

integration of international activities (this being consistent with Leksell's findings). It is also expected that companies which frequently include environmental information in internal reporting will be operating in industries that are more vulnerable to the environment, will exercise a tighter control over strategic variables in foreign subsidiaries, will be more internationalized and committed to foreign operations, and will be more experienced and larger in size (this latter factor assuming that large corporations have an organizational infra-structure capable of supporting more sophisticated techniques than small companies).

In order to complete the examination of the reporting practices of multinationals, certain characteristics of the internal systems will be analysed in the light of the organization of the environmental assessment activity in headquarters. The purpose of this is to discover whether internal reporting features such as the volume and nature of the information regularly reported, and the incidence and frequency of items on economic and non-economic environmental conditions are related to the way in which the environmental assessment activity is organized in headquarters.

It is hypothesized that multinationals which have formally institutionalized a central environmental assessment function will 1) require higher volumes of information from foreign subsidiaries, and so have a larger flow of data formally reported via the internal system; 2) prefer the reporting of information whose nature enables a better reflection of the particular environmental conditions faced by subsidiaries; and 3) have economic, political, legal, and social environmental information frequently forwarded by subsidiaries via the internal reporting system.

Having reached an understanding of the contextual background in which the control and evaluation of foreign subsidiaries is conducted, the study will be in a position to address one of its main research questions, that is which factors are associated with the capability of a company's performance evaluation criteria to take account of environmental influences in foreign subsidiaries. As explained earlier in chapter 6, the empirical evidence available as regards the ways in

which environmental differences across subsidiaries are accommodated in the performance evaluation process, is rather scarce and superficial. Therefore, no sound empirical basis is available here to support the formulation of hypotheses. However, the knowledge acquired in Part I of this study led to the creation of a framework which can be used in the generation of anticipated results. In particular, it is hoped that the theoretical background of the study will provide the necessary understanding of the performance evaluation process in MNCs, thus enabling to judge how sensitive to the environment are the performance evaluation and control practices of each of the companies surveyed. Such practices will be analysed and then aggregated into a measure which will reflect the degree of sensitivity of a formal performance evaluation system to environmental influences specific to foreign operations.

It is anticipated that those companies whose formal criteria of subsidiary evaluation and control are capable of recognizing to a greater extent relevant environmental influences that differ across host locations will be more vulnerable to environmental discontinuities (i.e. will operate in industries such as mining, agriculture and oil, will have high degrees of exposure to host country and government influence, and will practice some form of global integration of industrial activities on a cross-country basis). It is equally expected that companies with such evaluation systems will be more subject to variation in the host environments (high levels of internationalization due to operating in a large number of countries in different geographic areas), will be more internationally oriented either in operational terms (high levels of commitment to overseas activities), or in organizational terms (structures that emphasize international operations, and companies with tight strategic control over foreign subsidiaries), and, finally, will be larger in size and more experienced, hence, more inclined to use elaborate control techniques.

The degree of sensitivity to the environment of the formal performance evaluation and control practices employed in companies is also expected to be associated with the way in which the environmental assessment activity is organized in headquarters. In effect, companies

to which the influences of the environment on operations are sufficiently important to warrant the creation of a formal function of environmental assessment are expected to employ subsidiary evaluation techniques that recognize environmental impacts to a greater extent.

Parallel to the creation of a measure that independently assesses the degree to which the performance evaluation system in operation in a company takes environmental differences into account, the study also intends to ask participants how effective, in their opinion, are systems in taking account of the environment. Studies on American MNCs reviewed in chapter 6, namely Morsicato [1980], and Choi, Czechowicz and Bavishi [1982], attempted to determine the opinions of managers as regards the capability of systems to recognize environmental influences on foreign subsidiary operations. Results of these studies suggested that performance evaluation criteria generally did not adequately recognize the environment. Such findings were not confirmed, however, by the independent observation of the researchers. In the present study the perceptions of respondents are hoped to be validated by the independent measure of environmental sensitivity that is intended to be created. If a direct statistical association is found between respondents' perceptions and the scores of that measure, then it may be concluded that the opinions of managers as to the effectiveness of performance evaluation criteria in recognizing the environment are a good indicator of the actual capability of the criteria.

In order that such a link may be established, it is expected, therefore, that the perceptions of headquarters executives as to the effectiveness with which formal performance evaluation criteria recognize environmental influences will coincide with the intrinsic actual capabilities of the criteria to take the environment into account.

Another aspect that the study intends to explore is whether the environmental attributes of evaluation systems are in agreement with the requirements of their users. Such requirements sought for performance evaluation systems regarding the recognition of environmental influences on subsidiaries are hoped to be determined by

the perceptions of the systems' users of the variability of the environmental characteristics that impact on foreign subsidiaries. This, in turn, is expected to be associated with the extent to which evaluation systems should, in the executives' opinion, ideally be able to take the environment into account.

The perception of environmental variability on the part of executives who in headquarters assess the performance of subsidiaries may play an important role in the design of subsidiary performance evaluation and control systems. Studies previously reviewed such as Persen and Van Lessig [1979], Morsicato [1980], Choi, Czechowicz and Bavishi [1982], and Yunker [1982], revealed that executives in the headquarters of MNCs usually view the influence of external environments on subsidiaries as varying across location. These studies also suggested that such executives' views would most likely represent an important factor in the choice of the criteria employed in the evaluation and control of overseas operations.

In this study, the views of headquarters executives as to how environmental influences vary across different geographic areas operated by companies will be collected. Such views are likely to be substantially different from company to company according to the number and nature of countries and regions in the world where a MNC has established subsidiaries. In order that an independent measure of the perceptions of environmental variability may be obtained, the study will attempt to devise a method that will enable each executive's perceptions to be positioned in a consistent scale that reflects the extent to which the characteristics of the host environment are seen to change across foreign operations.

Given a measure such as this the study will be in a position to test first the relationship between the degree of environmental variability perceived by managers and the extent to which they think performance evaluation systems should be capable of recognizing the environment. It is expected that executives who perceive the influences of the environment on foreign subsidiaries to vary more widely across operations will wish formal performance evaluation criteria to take more extensive account of the environment. The test of this

hypothesis is hoped to confirm that the way in which the environment is seen to differ among host nations is directly associated with the requirements sought for the evaluation criteria as far as environmental recognition is concerned.

After establishing such a relationship, the perceptions of environmental variability of headquarters executives will then be tested against the actual sensitivity to the environment of the performance evaluation criteria operated by companies. It is hypothesized that multinationals whose executives perceive a great variation in the foreign environments will have formal criteria of subsidiary evaluation and control which extensively recognize environmental influences that differ across host locations. If this is so, it may be concluded that the intrinsic characteristics of the evaluation systems respond in an adequate way to the requirements of their users, as regards the extent to which the environment is taken into account.

So far, the hypotheses raised dealing with the performance evaluation process have all concerned the formal assessment criteria institutionalized in companies. However, as it was emphasized in the previous section, a complete understanding of the foreign subsidiary evaluation process cannot be achieved without considering the informal aspects of assessment. The literature reviewed in chapter 4 (section 4.4.) suggests that the use of informal information in internal decision making is motivated by the limitations and weaknesses of the MIS. In particular, it appears that informal information on the performance of subsidiaries is normally used as a substitute for the information provided by the official reporting channels.

The role of informal information as a replacement for the data collected through institutionalized channels is generally accepted in the literature even without the existence of a large empirical knowledge on which to base such a conclusion. The present study will attempt to determine how the reliance placed on informal information for foreign subsidiary performance evaluation varies with the degree of sophistication of the reporting systems operated between subsidiaries and headquarters.

In general, it is anticipated that informal information is used in practice with the purpose of overcoming the differences of formal information. This being so, sophisticated performance evaluation systems will require less informal information than unsophisticated systems. Based on this principle, the study hypothesizes that multinationals whose internal reporting systems present higher volumes of information being reported from subsidiaries and information of a more elaborate and wide nature, will show lower levels of reliance on information collected informally when evaluating the performance of foreign subsidiaries.

Particular attention is to be given in the study to foreign environmental information collected through informal channels of communication. Based on the same principle that an extensive use of informal information is related to the lack of sophistication of the evaluation systems, the study hypothesizes that MNCs whose formal performance evaluation criteria are less sensitive to environmental influences will collect more environmental information through informal channels. Similarly, it is expected that companies which do not have information on foreign environments regularly reported in the internal system or which have such an information reported infrequently will rely more extensively on informal environmental information for the evaluation and control of subsidiaries.

An overview of the main hypotheses of the study was presented here. Later in Part III such hypotheses will be operationalized and tested, and results will be related to the relevant literature. In the next section, the research methodology adopted in the study will be discussed.

7.5. The Research Methodology

The research strategy adopted in the study is survey research. As Kidder [1981, ch.4] notes, survey research involves the collection of data from all or part of a population to assess the relative incidence, distribution and relationships of naturally occurring phenomena. Embodied in this definition are two essential components of the empirical data to be generated. Such components derive from the formulation of the research problem and can be categorized as descriptive evidence of companies' practices, and inferential relationships between practices and corporate characteristics.

Due to the fact that hypotheses were generated on the basis of the currently available body of literature, and that such hypotheses will be later subject to testing, it can be said that the study is primarily of a deductive nature. However, as frequently remarked (for example, Kidder [1981, ch.1], Buckley, Buckley and Chiang [1976, ch.1.]), deductive and inductive elements are often simultaneously present in a research effort. In the particular case under investigation here, although the emphasis is on the deductive mode, an inductive, theory generating approach, will also be used whenever the evidence resulting from the data collected suggests further exploration and testing.

The survey research approach adopted in the study presents numerous advantages, and also some weaknesses [see Buckley, Buckley and Chiang, 1975, ch.2]. In the strengths side, perhaps the most salient are the ability to draw large samples which enable inference to large populations, and the opportunity to analyse data via a wide variety of powerful statistical techniques. These characteristics are expected to lend the study robust evidence that will allow generalization of the results to the research population. As to the deficiencies of the approach, they are related to the data collection instruments used, which are normally the questionnaire and the interview. Being such instruments based on opinion, it is frequently thought that they

cannot reveal reality but only impressions and beliefs of the respondents. It can be argued, however, that when the instruments emphasize factual rather than opinion questions, this problem becomes virtually non-existent provided that there are means to check the truthfulness of the answers. In addition, other weaknesses commonly mentioned include biases related to the design of the data collection instruments, deriving mainly from the prior selection of questions and response sets, as well as biases related to the administration of the instruments, such as sampling errors and the interviewer's role.

The data collection techniques to be employed in the study are mainly questionnaire and personal interview, and to a smaller extent archival search. Such techniques will be reviewed in the next chapter, and particular attention will be given to the decisions taken to enhance the validity of the information retrieved in order to overcome as much as possible the weaknesses just described.

7.6. Summary

This chapter placed the theoretical background previously reviewed in context and presented the framework in which the research is defined and operationalized. It started with the demarcation of the research problem and its justification in the light of the theory and the available empirical evidence. Basically, the research addresses the environmental issue in the foreign subsidiary and control process of MNCs and attempts to ascertain whether and how external environmental influences on overseas operations are taken into account in the performance evaluation and control systems used in practice. It also intends to discover the profile of the MNCs which employ systems that are more sensitive to the environment.

The articulation of the research problem into consistent steps in the investigation path required the formulation of a comprehensive model that operationalizes the issues conceptualized in the research. From

the construction of the model it became clear that the study would have to involve both a level of description where the practices of companies would be examined and a level of explanation where relationships among vital variables would be tested. The former includes not only the formal criteria used in the assessment of subsidiaries and managers but also other aspects that are considered necessary for an adequate examination of the research problem. These comprise the organization of the environmental assessment activity in the companies' headquarters, the internal reporting system operated internationally between headquarters and subsidiaries, and the role played by informal information in the performance evaluation and control process.

As to the latter aspect, the level of explanation involving relationships among variables, it was the object of a separate section in the chapter which presented the main research hypotheses of the study. A number of explanatory variables were anticipated to be associated with the way in which the environmental assessment activity is organized in headquarters, the magnitude and type of the information forwarded through the internal reporting system, and the capability of formal evaluation criteria extensively recognizing environmental influences that vary across host locations. Also, relationships between the intrinsic characteristics of the evaluation criteria employed and the perceptions of managers in headquarters of the actual and desired level of sensitivity to the environment possessed by such methods were hypothesized. Finally, hypotheses were formulated to determine the role played by informal information in foreign subsidiary and managerial performance evaluation. In particular, it was expected that companies whose systems are less sensitive to the environment would compensate for that by a higher reliance on informal information.

The chapter ended with the definition of the research methodology adopted. The particular strategy selected for the study is survey research which was considered the most adequate to the nature and characteristics of the empirical investigation to be conducted. The application of such a strategy requires the use of certain data collection instruments, which in the case of the present research will

be mainly the questionnaire and the personal interview. The chapter that follows will present the design of the research and will focus on the instruments that were going to be used in the collection of empirical data.

CHAPTER 8 - THE RESEARCH DESIGN

8.1. Introduction

The present study, being of an empirical nature, resorted to survey methods to collect information about practices followed in companies. Two instruments, very different in nature, were used to collect data: the mailing questionnaire, and the personal interview. The former is the pillar of the data collection in the study, whereas the interviews are mainly seen as a means of acquiring in-depth information in order to complement and sometimes clarify data from the questionnaire.

The process followed in the preparation and administration of the questionnaire will be described in the chapter. Questionnaire preparation is a time consuming task which involves the two major stages of planning and testing. Each stage can only be overcome when a certain number of phases are covered and an amount of problems solved, all of which will be discussed in the chapter. The administration of the questionnaire deals essentially with the definition of the study's survey population, and with the steps taken with the mailing of the questionnaire and the pursuit of a high response rate.

The chapter will also describe the follow-up interviews conducted, and will discuss the criteria adopted in the selection of companies, as well as the topics that were systematically covered during the interviews.

8.2. The Preparation of the Questionnaire

"There are few places in social research where time-consuming, painstaking effort is more rewarding than in the preparation of questions." [Kidder, 1981, p.162]

The above quotation expresses how important a careful and rigorous approach to questionnaire design is to the eventual quality of the results to be achieved by any survey research. Following this principle, a very substantial amount of time and effort was allocated to the construction of the data collection instruments in the present study.

The preparation of the questionnaire, which is the major source of empirical information in the study, followed two main stages. The first, consisted in the development of a plan where the information needed for the investigation was specified to the highest possible detail; the way in which such information would be presented in question form, and the most adequate sequence for the questions were also planned in this initial stage. The second phase involved the preparation of an early version of the questionnaire and its test in a varied number of situations; this stage culminated with the administration of the questionnaire to a small group of companies, and with the conducting of personal interviews with the respondents in order to improve questionnaire content and presentation.

8.2.1. Questionnaire Plan

Planning of the questionnaire in the mode adopted in the study was suggested by writings scattered over a number of sources, notably Selltitz et al. [1965, Appendix C], Oppenheim [1966, chs.2 and 3], and Moser and Kalton [1971, ch.13]. The questionnaire plan involves the making of several decisions prior to starting writing-up the questions. Such decisions regard the precise definition of the questionnaire content, and the determination of the sequence to be

followed in the presentation of topics of different nature. In this study four steps were taken before a drafted version of the questionnaire was ready to be tested. Such steps involved: 1) the definition of the main parts of the questionnaire; 2) the breakdown of these main parts into precise items of information; 3) the organization of such information in a natural sequence to be followed in the questionnaire; and 4) the writing of the questionnaire.

The definition of the major parts of the questionnaire was directly dictated by the areas that are pivotal to the study. These areas were defined in the preceding chapter (chapter 7), and follow from the research problem and the main research hypotheses formulated there. In this context, five main parts were identified for the questionnaire each seeking the characterization of a relevant dimension to the study. These consist of:

- I) Definition of the extent of formal environmental analysis undertaken by headquarters, and of its role in the subsidiary performance evaluation and control process.
- II) Characterization of the internal reporting system in operation (source of formal information for the evaluation of subsidiary performance).
- III) Characterization of the subsidiary performance evaluation and control process in use (how headquarters executives use the information provided by the internal reporting system).
- IV) Definition of the role played by informal information in the performance evaluation and control process.
- V) Characterization of the company - demographics.

The next step in the questionnaire plan involved the definition of every item of information to be collected, within each major part. Exhibit 8.I presents a list with all the items for which information collected via the measuring instrument was considered necessary. This represents the questionnaire specifications, and reflects its content

Exhibit 8.I - Questionnaire Content Specifications

I. DEFINITION OF THE EXTENT OF ENVIRONMENTAL ANALYSIS UNDERTAKEN BY HEADQUARTERS, AND OF ITS ROLE IN THE SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL PROCESS

I.1. .Environmental assessment function:

determination of the existence in the company of an institutionalized function for the collection and analysis of foreign environments (economic and non-economic).

determination of how the environmental assessment process is organized in the company, namely:

- main object of assessment, i.e. economic or non-economic factors
- sources of environmental information
- number of people, and their commitment (i.e. whether part-time or full-time), involved in the formal environmental assessment function
- locus of the environmental assessment function institutionalized in the company (i.e. whether the function is part of the controller/financial department, planning department, international division, board of directors, etc.)

I.2. .Uses made of the environmental assessment information:

determination of the activities and decisions where environmental analysis is systematically used

determination of how formal environmental information is incorporated in the subsidiary performance evaluation and control process

II. CHARACTERIZATION OF THE INTERNAL REPORTING SYSTEM IN OPERATION (SOURCE OF FORMAL INFORMATION FOR THE EVALUATION OF SUBSIDIARY PERFORMANCE)

.Content of the internal reporting system:

determination of the elements included in the internal reporting system operated between foreign subsidiaries and headquarters

.Magnitude of internal reporting:

determination of the amplitude of the information included in the internal reporting system operated

.Frequency of internal reporting:

determination of the time interval between consecutive submission of the elements included in the internal reporting system

.Degree of standardization of the reporting system:

determination of the variation in reporting requirements with regard to content, magnitude, frequency, and format, within each company.

Distinguish two different cases:

- variation in reporting requirements between the system used domestically and that used for international operations
- variation in reporting requirements among international operations

determination of the factors which influence the variation in the reporting requirements for foreign operations. Consider the following:

- size of subsidiary
- strategic importance of subsidiary to the company as a whole
- unsatisfactory performance level of subsidiary
- ownership share in subsidiary (i.e. wholly owned vs. partly owned subsidiaries or joint ventures)
- geographic location of subsidiary
- special difficulties encountered in host environment
- consolidation practice for subsidiary
- type of responsibility assigned to subsidiary (i.e. subsidiary as a profit-centre vs. subsidiary as a cost-centre)
- dominant managerial function in subsidiary (e.g. marketing oriented vs. production oriented subsidiary)

III. CHARACTERIZATION OF THE SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL PROCESS IN USE (HOW HEADQUARTERS EXECUTIVES USE THE INFORMATION PROVIDED BY THE INTERNAL REPORTING SYSTEM)

.Criteria used to measure foreign subsidiary operating performance:

determination of what information contained in the subsidiaries internal reports is most used in performance evaluation

- which success indicators are used?
- what is the relative importance assigned by headquarters executives to each indicator?

determination of the nature of the information most used in the evaluation of foreign subsidiaries' performance (i.e. whether the information is mainly profit-based or non-profit-based, quantitative or qualitative, financial or non-financial)

- is any information used in performance evaluation not reported through the financial reporting system?

.Administration of the performance standards:

determination of how a subsidiary's performance objective (profit or non-profit) for a given year is set

- is it based on the budget? who prepares the annual budget (subsidiary or headquarters)? to which extent does headquarters involve in budget discussion and revision?

determination of which standards of subsidiary performance are most used, in the assessment of actual results. Consider the following types of standards:

- subsidiary-related standards - e.g. specific performance targets (productivity yields, market share, etc.), budgeted results, historical standards (the past actual performance of the subsidiary)
- external standards - e.g. comparison against other subsidiaries of the company, comparison against similar firms in the country where the subsidiary operates, comparison against corporate-wide goals (general required rates of return, growth rates, etc.)

determination of the extent of environmental consideration in the setting of objectives and standards (e.g. strikes affecting productivity yields, locally protected competition affecting market share, inflation affecting production costs, costs of borrowing affecting profits)

- do targets (e.g. ROI) vary among foreign subsidiaries?

.Similarities in the formal criteria used to assess the operating performance of all the company's foreign subsidiaries:

determination of the variation in criteria used to control and evaluate the set of a company's foreign subsidiaries

determination of the factors which influence the variation in the control and evaluation criteria

.Differences in the performance evaluation and control processes used for foreign and domestic operations:

determination of how the evaluation criteria employed for foreign subsidiaries compare to the criteria used for domestic divisions (main aspects only)

determination of the headquarters' control staff opinion: should the criteria be different? why?

.Differences in measures and standards for subsidiary evaluation and managerial assessment purposes:

determination of how the evaluation criteria employed to assess foreign subsidiaries' operations, compare with the criteria used to appraise foreign subsidiaries' managers

.Environmental factors with an impact on subsidiaries' activities:

determination for the different geographic areas in the world of which environmental factors are perceived to have a high influence on subsidiaries' operating performance

.Perceptions of the headquarters' control staff about the control process, as regards the capabilities of the formal control system to account for the environmental peculiarities of foreign operations:

determination of how headquarters executives perceive the appropriateness of the evaluation system in effectively reflecting environmental factors affecting foreign operations

determination of how headquarters executives perceive the need for the evaluation system to effectively reflect dominant environmental factors affecting foreign operations

IV. DEFINITION OF THE ROLE PLAYED BY INFORMAL INFORMATION IN THE PERFORMANCE EVALUATION AND CONTROL PROCESS

.Extent of the use of informal vs. formal information in the performance evaluation and control process:

determination of the degree of reliance placed by headquarters executives on the subsidiaries' formal reports, for the purpose of evaluation of operating performance (both for subsidiary and manager)

determination of the extent of information collected via informal channels, used in the evaluation and control of subsidiary and managerial performance. Determination of:

- what are the main sources of informal information about the peculiarities of each foreign subsidiary?
- how is such information used for unit performance evaluation, both organizational and managerial?

.Determinants of the use of informal information:

determination of the main reasons for the collection of informal information by headquarters executives. Consider the following:

- need for a higher volume of information on vital issues
- need for more timely information
- need for more reliable information
- need for confidential information
- need for more understandable and useful information

V. CHARACTERIZATION OF THE CORPORATION (BASED ON THE STUDY'S INDEPENDENT VARIABLES)

.List of characteristics:

to be collected from the questionnaire:

- percentage of company assets located outside the U.K. to total company assets
- number of foreign countries where the company maintains control over industrial facilities, and their distribution over the different areas of the world
- year in which the company established its first industrial facility outside the U.K.
- organizational structure
- degree of control exercised by HQ over foreign subsidiaries, as far as policy and strategic decisions are concerned
- type of strategy followed by the company in the organization of its international industrial activity
- degree of exposure of the company to host country and government influence in foreign operations

to be collected from company annual reports:

- dominant industry group for the international activities of the company
- sales revenue for the total group
- total group assets
- percentage of sales from foreign subsidiaries to consolidated sales revenue

in a detailed manner.

Before the items in the list were converted into questions, a decision on the most adequate sequence of topics to be presented in the questionnaire had to be made.

As Kidder [1981, ch.8] argues, such a sequence should adopt the best psychological succession of topics from the standpoint of the respondent, which is not necessarily the most logical sequence for the researcher. The questionnaire structure presented in Exhibit 8.II is believed to have the advantage of being logical for the respondent and at the same time of providing the study with a rational succession of topics.

In addition, the questionnaire starts by addressing a topic believed to be novel for many companies, and so likely to raise the immediate interest of the respondent⁽¹⁾. In a way, the questionnaire structure follows a "funnel" sequence [Oppenheim, 1966, p.38], in the sense that the scope of topics introduced are progressively narrowed down as far as environmental considerations in performance evaluation are concerned. In order that Exhibits 8.I and 8.II might be reconciled, each stage in the flow chart that describes the structure of the questionnaire (Exhibit 8.II) is directly linked to the respective major topic included in the list of questionnaire specifications (Exhibit 8.I).

The writing of the questionnaire, as the final stage in the questionnaire plan, involves formulating questions and deciding about the questionnaire format or presentation. Question formulation is mainly guided by norms of common sense. However, useful advice can be amply found in the research methodology literature in the form of guidelines and points to be watched in the writing of questions. Two important references here are Kidder [1981, pp.163-178], and Payne [1951, ch.14], which provide a very comprehensive checklist of the most important features of question wording. Writing questions usually becomes a complex task which requires that decisions should be made on question content (e.g. to cover a certain item, are several questions needed or does one question cover the ground intended?), and

Are host country environmental conditions regularly collected and analysed in the companies' headquarters?

REQUIRING

DEFINITION OF THE EXTENT OF ENVIRONMENTAL ANALYSIS UNDERTAKEN BY HEADQUARTERS
(Part I.1 of the questionnaire plan)

Yes

No

Is the environmental information collected by HQ incorporated in the evaluation and control process of overseas operations?

REQUIRING

Why not?

DEFINITION OF THE ROLE OF ENVIRONMENTAL INFO. IN THE SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL PROCESS
(Part I.2 of the questionnaire plan)

Yes

No

How?

In what way does the environmental information interact with the subsidiary performance evaluation and control process?

REQUIRING

Is the subsidiary performance evaluation and control process sensitive enough to the specificity of the host country environments?

REQUIRING

CHARACTERIZATION OF THE INTERNAL REPORTING SYSTEM IN OPERATION (SOURCE OF FORMAL INFO. FOR THE EVALUATION OF SUBSID. PERFORMANCE)
(Part II of the questionnaire plan)

AND

CHARACTERIZATION OF THE SUBSID. PERFORMANCE EVALUATION AND CONTROL PROCESS IN USE (HOW HQ'S EXECUTIVES USE THE INFO. PROVIDED BY THE INTERNAL REPORTING SYSTEM)
(Part III of the questionnaire plan)

What is the role played by informal info. in the subsid. performance evaluation and control process?
To which extent is environmental info. collected via informal methods?

REQUIRING

DEFINITION OF THE ROLE PLAYED BY INFORMAL INFO. IN THE PERFORMANCE EVALUATION AND CONTROL PROCESS
(Part IV of the questionnaire plan)

What are the characteristics of the company?

REQUIRING

CHARACTERIZATION OF THE CORP. IN TERMS OF THE INDEPENDENT VARIABLES DEFINED FOR THE STUDY
(Part V of the questionnaire plan)

on question wording (e.g. does the question contain unclear terminology?; is the wording biased?); decisions about form of response (e.g. can the question be asked in a form calling for a check-answer?; if a checklist is used, does it cover all the possible alternatives?), and decisions about the place of the question in the sequence (e.g. is the answer to the question likely to be influenced by the content of preceding questions?) are also needed during question formulation.

The prime consideration in building this study's questionnaire was ease of response in order to elicit the highest possible return rate. For this reason, questions were formulated in closed form whenever possible [Oppenheim, 1966, pp.40-44] using open-ended or free-answer questions only for probing aspects of the research that are particularly important and difficult to comprehend. Following the Sudman and Bradburn [1982, p.262] suggestions, the questionnaire ends with an open-ended question, giving respondents an opportunity to make additional comments; questions asking why certain practices are used in companies instead of others, and why respondents hold certain opinions were left for the follow-up interview, since it would be impractical to include them in the questionnaire. In its most sophisticated form, closed questions require the use of scales. Scaling methods present a number of advantages, which justified their widespread use in the study's questionnaire. The main feature of scales is that they do not ask the respondent to write anything since the response consists of a tick mark in a certain score [Oppenheim, 1966, ch.4]. Besides this advantage, scales enable several variables to be represented by a single score that reduces the complexity of the data; they also provide quantitative measures that facilitate statistical manipulation. For a discussion of the advantages of scaling techniques see also Nachmias and Nachmias [1981, ch.11]. When the use of scales was not advisable, rankings [Oppenheim, 1966, pp.92-94] were included in the questionnaire. As regards the determination of the order of questions within a topic, the questionnaire attempted to adopt a logic sequence in the respondent's perspective, taking always into account possible conditioning effects of earlier questions [Moser and Kalton, 1971, p.346]. In order to ensure that all contingencies were included, and also to encourage complete response,

filter questions were used in the questionnaire, having the normal precautions with this type of questions been taken [Sudman and Bradburn, 1982, pp.223-226].

An important aspect to preserve in any questionnaire is the reliability and variability of the questions. To ascertain reliability in the case of factual questions, Oppenheim [1966, p.71] suggests the use of internal checks, which could involve the formulation of a same question in different ways. This practice necessarily leads to an increase in questionnaire size, and, hence, cannot be overused. Questions with the sole purpose of acting as checks on others were not included in the questionnaire. However, in some instances it is possible to confirm the reliability of the information provided, since different questions were sometimes used to characterize different traits of the same phenomenon⁽²⁾. Determination of the reliability of attitude questions can only be done by using sets of questions or attitude scales [Oppenheim, 1966, p.73], since internal checks as described for factual questions are not possible here. Overall, the questionnaire makes very little use of attitude questions. One of its parts, however, is more prone to the use of such type of question. It is the part which deals with the use of informal information for subsidiary performance evaluation and control. Sets of questions relating to attitudes towards informal information as regards its purpose and nature, and the reasons for its use were introduced in the questionnaire. As far as tests of validity are concerned, cross-checks against a second independent source of information present the best way to control for the validity of factual questions [Oppenheim, 1966, p.72]. The only part of the questionnaire susceptible of cross-checking is the last one on demographics. Information about geographic areas operated and Percentages of assets located outside the U.K provided by respondents in this part was checked against company annual reports, which for another reason had to be consulted for every firm participating in the study. This archival information constituted a third source of data used in the research.

8.2.2. Questionnaire Pilot

The testing of the questionnaire is the logical step to follow after the planning process has led to the construction of a first draft. The pilot consists in a tryout of the questionnaire to ascertain how it works and whether changes are necessary before the start of the full-scale study. The pilot provides a means of detecting and solving unforeseen problems in the administration of the questionnaire, such as the wording and sequence of questions or the questionnaire overall length. It may also indicate the need for including new questions or deleting others [Kidder, 1981, pp.162-163].

Several versions of the questionnaire were drafted before a final version was ready to be tested in companies. This version was mailed to six multinationals included in the survey population, with a covering letter explaining that the questionnaire sent was being subject to a test, and that the researcher was looking for advice on the questionnaire content and presentation. The selection of the six companies was based on contacts previously established or on geographical identity with the University where the study was being conducted. Four of these firms agreed to complete the questionnaire and to have a personal interview with the researcher. Such interviews were conducted with a director of each company (normally the financial director), and last between 90 minutes and two hours.

A substantial part of the interview was spent discussing relevant issues in foreign subsidiary performance evaluation and probing answers given in the questionnaire in order to determine whether questions were correctly formulated, were not misleading, did not contain unclear terminology, and whether companies' practices as described in the interview were consistent with the answers given to the respective questions included in the questionnaire. Also the choices provided for closed questions were tested, in order to check their relevance and to detect any important alternative that might be hidden under the "other" category.

Also of relevance during the test-interviews was the discussion of aspects of the questionnaire related to its appearance. Evidence reported in several sources [e.g. Sudman and Bradburn 1982, ch.9; Oppenheim, 1966, ch.3] suggests that in written questionnaires layout, printing, choice of paper, spacing and other features all have an impact on the level of response. All these aspects of questionnaire presentation were discussed during interviews. Another important aspect with strong implications for survey success is questionnaire length. According to Sudman and Bradburn [1982, p.267], the acceptable size of a mailed questionnaire seems to be related to its level of salience for the population. On highly salient topics with special populations, longer questionnaires of up to sixteen pages are said to be possible. In the opinion of the respondents interviewed during the pilot, the length of the fourteen-page questionnaire tested was not considered to be a serious obstacle to participation in the study.

Finally, the test-interviews discussed the clarity and relevance for the respondent of the questionnaire front page, where a brief description of the study was given, together with general instructions for participation. The importance of the front and back covers of questionnaires is greatly emphasized by Dillman [1978] who suggests that the front cover should contain a study title, an illustration, any needed directions, and the name and address of the study sponsor or the researcher. The back cover should be left blank so that it may be used for additional comments by the respondent.

The contribution of the pilot stage for the version of the questionnaire used in the full-scale study is discussed next.

8.2.3. The Final Version

The long process of questionnaire planning and testing finally culminated with the construction of a definitive version to be mailed to the whole of the survey population. This version differs from the one that was piloted in only minor aspects. Alterations introduced

include a different question order in one of the parts of the questionnaire (i.e. Section I), the elimination of a question which eventually resulted in the reduction of the size of the questionnaire in one page, and the rephrasing of some questions motivated either by the use of more clear terminology, or by the inclusion or deletion of certain choice-answers.

The questionnaire in its final form is presented in Appendix A. This version consists of a front cover and thirteen pages of questions which were printed in double-sided sheets in order to reduce volume. Together with the questionnaire two covering letters were also mailed, one signed by the director of the institution where the research was being conducted, the other signed by the researcher (see Appendix B.I). These letters made a brief introduction to the research project and emphasized how relevant its findings could be for current company practice. As a means of motivating companies to cooperate it was promised to send to each participant a detailed summary of the research findings. Another aspect stressed not only in the letters of introduction but also in the questionnaire front and back pages, was confidentiality of the data. Results were said to be presented only in aggregate form, keeping individual respondents and company names anonymous in all circumstances.

8.2.4. The Study Original Variables

From the questionnaire in its final version it was possible to create a list with all the study original variables. These are the basis of the statistical analysis to be performed later in the study, with the assistance of a package particularly suited to the nature of the investigation (SPSS - Statistical Package for the Social Sciences).

Generally each question gives rise to one variable taking on the values corresponding to the several available alternative answers provided in the questionnaire form. However, for those questions which enabled a multiple response, several variables had to be defined, all of dichotomous nature, and each corresponding to one of

the alternative answers provided [Hull and Nie, 1981, ch.8].

Appendix C presents a list with all the original variables of the study, providing for each variable a meaningful label and the possible range of values that the variable may take on. This list is believed to represent a useful source of reference for the reader, in the part of the study which reports the results.

On the whole, the number of original variables amounts to 312. Three hundred and six of these resulted directly from the questionnaire, four (the last four variables in Appendix C) correspond to information collected from the annual company reports, and the remaining two (the first two variables in Appendix C) were introduced as means of identification of each case and of the request number after which the respective questionnaire was received.

8.3. The Administration of the Questionnaire

This section deals with all the aspects involved in making the questionnaire reach the survey population and in ensuring the highest possible response rate. It describes how companies were selected for the study, as well as which steps were taken in mailing the questionnaire and in controlling the returns. The section ends with the presentation of the survey results, where the overall response rate and the percentage of companies participating in the study are revealed.

8.3.1. Definition of the Survey Population

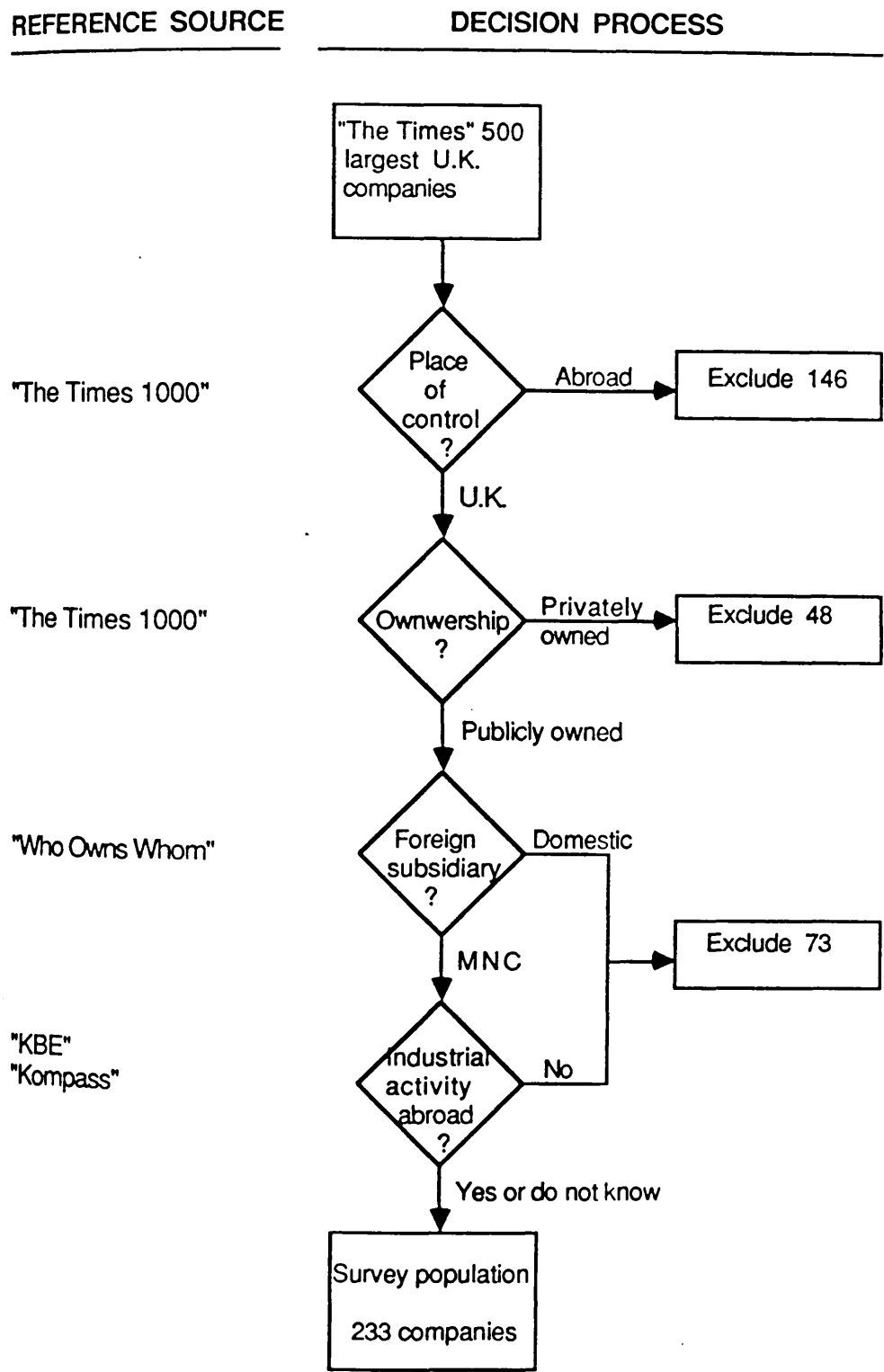
The study explores the performance evaluation practices used by British multinationals for their foreign subsidiaries and managers. These MNCs are defined for effects of the survey as U.K. based public

firms with at least one foreign subsidiary (i.e. a company located overseas which is controlled by the group) engaged in manufacturing or other industrial activity, namely assembly, exploration and construction. The survey population [Moser and Kalton, 1971, pp.53 and 155] is composed of all the companies meeting the above criteria and included in the 500 largest U.K. industrial companies list, from The Times 1000 [1982-83].

The selection of companies to be circularized followed a process that is best described in flow-chart form (see Exhibit 8.III). From an initial list of 500 companies included in the source of reference mentioned above, those that are controlled from abroad were first excluded. Such companies being subsidiaries of foreign multinationals are obviously out of the scope of the study.

Next, private (i.e. unquoted) companies were eliminated from the list. The basic reason for the exclusion of such companies from the study is that they are usually more secretive and unwilling to provide information to outsiders than quoted companies. In addition, annual reports, which are a crucial source of information for the study, are generally difficult to obtain for these companies. After the exclusion of foreign and unquoted firms, the list was left with 306 corporations (Exhibit 8.III) which had to be checked to ascertain whether they were multinationals in the sense defined in the study. Given that no information is provided in The Times 1000 as to the geographical spread of the companies' industrial activities, other reference sources had to be consulted. Identification of those companies that are purely domestic was made possible by the Who Owns Whom [1983] directory which gives for each company a complete list of subsidiaries with the respective country of operation. Having all domestic companies been eliminated from the list, the next step was to find out which of the remaining firms had manufacturing or other industrial activities (i.e. assembly, exploration and construction) overseas, since only these were eligible for the study. Two reference sources were of assistance here: KBE [1983] and Kompass [1982]. While most of the times it was possible to determine the nature of the companies' overseas activities, in some cases that information could not be ascertained with a reasonable level of

Exhibit 8.III - Process Followed in the Selection of Companies for the Survey Population



safety. In such cases, firms were included in the list and sent a questionnaire with a special cover page, which asked for the questionnaire to be returned uncompleted if the company's operations outside the U.K. were not involved in manufacturing (or other industrial) activities.

The initial list of 500 companies was reduced to 233 after all the cases that did not meet the study requirements were eliminated (Exhibit 8.III). These 233 corporations, which constitute the study's survey population, were all circularized as described in the next section.

8.3.2. Mailing of the Questionnaire

Each company included in the survey population was sent a package comprising a copy of the questionnaire, two personalized covering letters⁽³⁾ addressed normally to the company's financial director, and a stamped, self-addressed envelope. The covering letters included the name of the company directors to whom the questionnaire was being sent, his formal title, the complete name of the company, and the address. Company addresses were found in The Times 1000 [1982-83], and confirmed in the Who Owns Whom [1983] directory. Names of the relevant companies' directors were sometimes difficult to find. The process followed in order to determine the name and formal title of the director in each company's Board responsible for the financial function, made use of information sources, such as KBE [1983], and Kompass [1982]. These directories provide for each company the name of all the respective directors, and sometimes indicate their area of responsibility. When it was not possible to determine who was the financial director of a company, all directors' names for that company were checked against the Directory of Directors [1983] index, in the hope that such information could be obtained. This process proved to be successful in the great majority of cases. Telephone calls were made for those companies for which it was impossible to determine the name of the financial director from the available written sources. Although involving a very time consuming search, it was believed that

the practice of addressing the questionnaire to the right person in each organization would result in a greater response rate for the study.

The first batch of questionnaires was mailed in mid July of 1983. The strategy pursued to follow-up responses consisted in the mailing of a second request (or first reminder) to all those companies which failed to respond after four weeks, either in the form of completing the questionnaire, or by sending a letter acknowledging its reception. One-hundred and thirty-nine companies (i.e. 59.7 percent of the total) were in this situation. After another six weeks without hearing from the companies, a third request (or second reminder) was mailed. This time 58 companies (i.e. 41.7 percent of the cases sent the second request) were circularized. Each of the two reminders included a new covering letter, specially prepared (see Appendices B.II and B.III) and a fresh copy of the questionnaire.

A letter of acknowledgement was sent to all the companies which participated in the study by completing the questionnaire. This letter which was another opportunity to thank the respondents for their participation, reaffirmed the intention previously expressed in the covering letters of sending in due course a summary of the study's findings to each participant (see Appendix B.IV).

8.3.3. Survey Results

The final results of the survey are presented in Exhibit 8.IV. To start with, 23 companies returned the questionnaire uncompleted confirming in writing that it was not applicable to them. These are firms whose operations outside the U.K. are not engaged in manufacturing (or other industrial) activities. As discussed in Section 8.3.1., these companies should not have been included in the survey population in the first place. However, there was no means of detecting them in advance. The result, is to bring down the size of the survey population to a total of 210 companies, instead of the 233 figure initially obtained.

Exhibit 8.IV - Results of the Survey Administration

Number of companies included in the survey		233
* Number of companies which participated in the study		101
Number of questionnaires received	100	
Usable questionnaires	97	
Rejected questionnaires	3	

Number of companies participating without having completed the questionnaire	1	

* Number of companies which declined to participate in the study		67
* Number of companies which considered the questionnaire not applicable (i.e. firms with no manufacturing - or other industrial - activity outside the U.K.)		23
* Number of companies which did not answer		42

OVERALL RESPONSE RATE TO THE SURVEY (191/233) : 82.0 %

PROPORTION OF COMPANIES PARTICIPATING
IN THE STUDY OUT OF TOTAL NUMBER OF
ELEGIBLE COMPANIES (101/(233-23)) : 48.1 %

On the whole, 101 companies participated in the study, which corresponds to a success rate of 48.1 percent (Exhibit 8.IV). Questionnaires were received from 100 firms; however, only 97 of them are usable since three had to be rejected, either because they showed large parts incompleated, or because they referred to companies with only marketing operations outside the U.K. In one special case, a company did not fill the questionnaire but offered to participate in the study by allowing an interview with headquarters executives. This company considered that the questionnaire was not suited to the characteristics of its operations, which are rather uncommon. The group is organized by different lines of business, each with very high levels of independence from the parent, and with their own headquarters. Subsidiaries in this large corporation are not controlled by the group's parent, but by the headquarters of the respective line of business.

A number of companies - 67 - wrote saying that they would not be participating in the survey (Exhibit 8.IV). The reasons given are widespread, ranging from confidentiality and company general policy to internal pressures on time and lack of available managerial resources. It is interesting to note the frequency with which companies mentioned the large volume of requests of this type they were receiving, making it impossible to respond to any of them.

The remaining companies - 42 - did not answer at all after the three attempts that were made (Exhibit 8.IV). This corresponds to only 18 percent of the total number of companies circularized, which means an overall response rate to the survey of 82 percent.

8.3.4. Non-Response Bias

In order to determine whether the 97 companies that participated in the study are a good representation of the total survey population a test of non-response bias was conducted. This test was based on the sales figures of corporations as indicated in the Times 1000 [1982-83], from which the survey population was selected.

A conventional way of measuring the bias due to non-response, suggested by authors such as Moser and Kalton [1971, ch.7], and Nachmias and Nachmias [1981, ch.12], consists of applying the following formula:

$$u_1 - u = R_2 (u_1 - u_2)$$

where $R_2 = N_2/N$, N_2 being the number of cases in the "non-response stratum", and N the total number of cases in the population; u_1 is the mean (sales) of the "response stratum"; u_2 is the mean (sales) of the non-response stratum; and u is the mean (sales) of the entire population.

In this particular study, $R_2 = (210-97)/210=0.538$, $u_1 = £920.9$ million, and $u_2 = £917.8$ million. Thus, the difference between the average sales for the cases that participated in the survey and the average sales for all the companies included in the survey population is only:

$$u_1 - u_2 = £1.7 \text{ million}$$

A more intuitive measure of non-response bias is perhaps given by the percentage of the difference between the mean sales of the respondents and the mean sales of the total survey population relatively to the mean sales of the total survey population. Borrowing the symbols from the previous formula, the computation of such a measure can, therefore, be written as follows:

$$\text{Non-response bias} = (u_1 - u)/u \times 100$$

The application of this formula to the data in the study reveals a very small non-response bias of 0.18 percent. In other words, the deviation of the mean sales of the 97 companies that participate in the study to the total survey population is only 0.18 percent of the mean sales of all the companies selected for the survey.

8.4. The Follow-Up Interviews

Interviews conducted with questionnaire respondents constituted a supplementary source of information used in the field study. The purpose of the follow-up interviews was to explore in more detail certain aspects of interest to the research, and also to confirm the capability of the questionnaire in accurately reflecting companies' practices.

The selection of firms was made on a judgemental basis, and attempted to cover a range of companies with different practices related to the following key issues:

- 1) Way in which foreign environmental information is collected and analysed in headquarters (Question 1 - Section I)
- 2) Inclusion or not of reports on host country economic, political, legal, and social conditions in the internal reporting systems operated between subsidiaries and headquarters (Question 1 - Section II)
- 3) Degree of reliance on non-financial and non-profit financial indicators of performance in the control and assessment of subsidiaries' activities (Questions 1 and 3 - Section III)
- 4) Similarity of the methods used to evaluate the performance of subsidiary operations, and to assess the performance of subsidiary managers (Question 11 - Section III)
- 5) Level of reliance placed on informal information for performance evaluation (Section IV)

Personal interviews with the relevant top executives⁽⁴⁾ were conducted in seven multinationals. The number of interviews in the study had to be kept small for reasons of economy, since they involved considerable

travelling. The duration of the interviews varied substantially from case to case, and ranged from a minimum of one and a half hours to a maximum of four hours. In this latter case a panel of four top executives was interviewed.

The method used in the interviews followed a "less structured" approach, of the focused type [Kidder, 1981, pp.187-188]. The "framework of topics" [ibid.] covered included probes into the way in which the environmental assessment function is organized in companies headquarters, and the importance attributed in subsidiary performance evaluation to economic and non-economic environmental information formally reported via the internal communication systems. It also included questions to enable a better understanding of differences in methods used to evaluate the performance of foreign and domestic subsidiaries, as well as in criteria employed to evaluate the performance of operations and managers. The major elements of the companies' planning process (operating budget, capital budget, long term plan) and respective implications in the evaluation activity were also topics raised. Of particular interest were questions which tried to determine how environmental differences among subsidiaries are incorporated in targets, and how headquarters executives ascertain the reasonableness of such targets. Other aspects discussed in the interviews included the importance, as perceived by executives, of non-profit and qualitative information, and the reliance they place on information reported through non-institutionalized channels in the evaluation of operating performance. As regards the criteria used to assess managerial performance, the issue of supplemental compensation (bonuses) and its relation to subsidiary results was raised. Finally, managers' perceptions as to the actual and desired capabilities of the formal evaluation criteria to take important environmental factors into account, were explored in the interviews. An attempt was also made to find out whether evaluation practices used in headquarters had been modified in the recent past, and whether such modifications had been motivated by changes in the international environment.

The interviews had the merit of providing the researcher with many interesting and valuable in-depth views which greatly contributed to a better understanding of the main issues. In the next major part of

the study (Part III) where results are described, views and opinions of executives collected during the interviews will be presented as an illustration and complement to companies' practices reported on the basis of questionnaire information.

8.5. Summary

This chapter described all the steps taken in the study to create the means that made possible the collection of empirical information. The major data collection instrument was the questionnaire, whose preparation and administration were reported in some detail. A lot of effort was put into the design of the questionnaire, based on the premise that any empirical study can only be at least as good as its data. Two major phases were followed in the preparation of the questionnaire. In the first, the questionnaire was carefully planned through a sequential path which comprised the definition of the main parts, the breakdown of each part into precise items of information, the organization of such information in a natural succession, and the writing of the questionnaire. This latter aspect involved decisions not only about formulation of the questions, but also about format and presentation of the questionnaire. Question formulation, though essentially an art, may become a technical and complex task requiring decisions on a number of aspects, such as question content, wording, form of response, and place in the overall sequence. The options made in each of these aspects were amply discussed in the chapter. Also the issues of question reliability and validity were discussed.

The second major phase of questionnaire preparation involved the perfectioning of successive drafted versions until reaching the stage of having a pilot version ready to be tested in companies. Four multinationals included in the survey population agreed to complete the questionnaire and to have a personal interview with the researcher to discuss aspects related to questionnaire content and appearance.

The present chapter also described the steps taken to administer the questionnaire. The survey population was selected from among the 500 largest companies in The Times 1000, and is composed of U.K.-based quoted companies with at least one foreign subsidiary - this being defined as a firm located overseas which is controlled by the group - involved in an industrial activity namely manufacturing, assembly, exploration or construction. The identification of companies satisfying these requirements from the list provided by The Times 1000, followed a process which made use of a number of other reference sources. At the end, the list of 500 corporations was reduced to a number of 233. These are the firms which constitute the study's survey population. All of them were circularized, and responses followed-up. Two subsequent reminders were mailed to those companies which failed to respond. The final survey results are very satisfactory, with an overall response rate of 82 percent, and a percentage of companies participating in the study of 48 percent. A test of non-response bias revealed only a minute deviation between the group of respondents and the entire survey population.

The chapter concludes with the discussion of the follow-up interviews that were conducted with questionnaire respondents. The interviews were personal and of the focused type. Their purpose was essentially to explore in-depth aspects of interest to the research, and to provide another check for the accuracy of the questionnaire. Seven interviews were conducted, all having last for a considerable amount of time. A list of topics, described in the chapter, was systematically covered in the interviews, and from the discussions held many interesting insights which supplement questionnaires information were obtained.

Footnotes:

- (1) Reasons of potential attractiveness of topics to the respondents dictated the inclusion of the part on demographics last in the questionnaire. It is believed that questions on company characteristics such as geographical spread of the firm, organizational structure, and level of assets are considered uninteresting by respondents, and likely to reduce response rate if included in the beginning of a questionnaire. For a reference endorsing this view see, for example, Sudman and Bradburn [1982, pp.218-219].
- (2) Examples of internal checks in the questionnaire are question 1 (Section III) whose answers can be compared with those provided for question 1 (Section II). Question 3 (Section III) acts as a check on questions 2a and 2b (Section III). So does question 1 (Section V) on question 12 (Section III). And question 2 (Section IV) on question 11a (Section III). A copy of the final version of the questionnaire is found in Appendix A.
- (3) Such covering letters were discussed previously in section 8.2.3., and are presented in Appendix B.I.
- (4) The personal follow-up interviews were conducted with the Group Finance Director in four of the companies. In the remaining three, the executives interviewed were the Group Vice Chairman, the Head of Group Finance and Accounting (plus three other executives), and the Group Director for Overseas Operations.

PART III

DATA ANALYSIS AND RESULTS

CHAPTER 9 - CHARACTERIZATION OF THE RESEARCH SAMPLE

9.1. Introduction

Part III of the study initiates with the present chapter which aims at a characterization of the research sample. Here, the 97 sample companies are described in terms of ten major characteristics. These company characteristics were derived from the literature and represent the independent or explanatory variables of the study. Companies' practices reported in the following chapters will be associated with such variables. The objective will be to unveil relevant relationships between the way in which MNCs process information and use that information in foreign subsidiary performance evaluation, and major features of the companies such as size, level of internationalization, overseas experience, exposure to local governmental influence, and international corporate strategy. When earlier in chapter 7 (section 7.3.) the operational model of the research was presented, a number of corporate characteristics were suggested to be able to act as explanatory variables for the study. However, the concrete definition of such variables and the determination of the criteria employed for their measurement were not attempted then. This will be done now, since to achieve the characterization of the research sample each company characteristic will have to be operationalized.

9.2. Company Characteristics

This section will describe how each company characteristic selected as an independent variable of the study was defined, how it was measured and how corporations making up the research sample are distributed by the several categories of each characteristic.

9.2.1. Type of Industry

Companies were classified according to the dominant industrial activity of their overseas operations. The industrial categories were based on the "F.T. - Actuaries Equity Indices" classification, and include four groups, each with the following industries:

GROUP 1. Capital Goods - CLASSES: Mechanical engineering. Electrical engineering. Motors. Building materials and other industrial materials. Construction.

GROUP 2. Consumer Goods - CLASSES: Food manufacturing, tobacco and household products. Publishing & printing, and paper & packaging. Textiles and other durable consumer goods.

GROUP 3. Other Goods - CLASSES: Chemicals. Oil. Agriculture and mining. Other industries.

GROUP 4. Miscellaneous Activities. This is a one-class group, including those companies for which it is not possible to determine one dominant activity abroad. Generally, these are firms engaged in several distinct activities overseas with no single dominant industry.

The distribution of the companies by the respective classes was undertaken on a judgemental basis from information provided in the companies' annual reports. The latest report available for each of

Table 9.I - Industry Characteristics of Sample Firms

		ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	ADJ FREQ (PERCENT) FOR EACH GROUP
CAPITAL GOODS	Mechanical engineering	24	24.7	
	Electrical engineering	7	7.2	
	Motors	4	4.1	
	Building materials and other industrial materials	10	10.3	
	Construction	7	7.2	53.6
CONSUMER GOODS	Food manufacturing, tobacco, and household products	11	11.3	
	Publishing & printing, and paper & packaging	7	7.2	
	Textiles and other durable consumer goods	5	5.2	23.7
OTHER GOODS	Chemicals	7	7.2	
	Oil	4	4.1	
	Agriculture and mining	4	4.1	
	Other industries	2	2.1	17.5
	Miscellaneous activities	5	5.2	5.2
TOTAL		97	100.0	100.0

N (number of valid cases) = 97

the 97 firms (generally the 1983 report) was carefully studied, in order to ascertain for each case the dominant industrial activity outside the United Kingdom.

Table 9.I provides the number of companies included in each class, and shows that 52 firms (i.e. 54 percent of the total) fall under the capital goods group, whereas 23 firms (i.e. 24 percent) are included in the consumer goods group. One single industry - mechanical engineering - accounts for one-fourth of all cases.

9.2.2. Company Size

Company size is measured in terms of two criteria: sales and assets. Sales are defined here as the total consolidated revenue for the group, during the last accounting year, i.e. 1983, as per the company report. Sales for the companies included in the sample range from a minimum of £80 million⁽¹⁾ to a maximum of £19 663 million with a mean of £952.9m. Twenty-five companies (i.e. 26 percent) have sales of under £200m (small companies), 32 firms (i.e. 33 percent) have sales between £201m and £500m (medium companies), 27 companies (i.e. 28 percent) between £501m and £1500m (large companies), and 13 corporations (i.e. 13 percent) have sales of over £1500m (giant companies) - see Table 9.II.

Assets, the other criterium employed to measure the size of a company, are defined as the total amount of consolidated net assets (i.e. fixed assets plus current assets less current liabilities) for the group, at the last accounting year-end (1983), also as per the company report. Assets of the sample companies range from £23 million⁽¹⁾ to £10 454 million, with a mean of £463.4m. Thirty-eight companies (i.e. 39 percent) have assets of under £100m (small firms), 23 companies (i.e. 24 percent) between £101m and £250m (medium), 26 companies (i.e. 27 percent) between £251m and £750m (large), and 10 firms (i.e. 10 percent) of over £750m (giant companies) - see Table 9.III.

Table 9.II - Size of Sample Firms Measured in Sales

£ MILLION	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
-200	25	25.8	25.8
201 - 500	32	33.0	58.8
501 - 1500	27	27.8	86.6
1501+	13	13.4	100.0
TOTAL	97	100.0	

N = 97

MAXIMUM	19662.80	MINIMUM	80.00
MEAN	952.92	STD DEV	2194.86

Table 9.III - Size of Sample Firms Measured in Assets

£ MILLION	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
-100	38	39.2	39.2
101 - 250	23	23.7	62.9
251 - 750	26	26.8	89.7
751+	10	10.3	100.0
TOTAL	97	100.0	

N = 97

MAXIMUM	10454.40	MINIMUM	23.00
MEAN	463.40	STD DEV	1280.56

9.2.3. Level of Companies' Commitment to Foreign Operations

This variable is also defined according to two criteria. One, is the percentage of sales achieved in foreign markets to group consolidated sales revenue, during the last accounting year, i.e 1983. Included in this figure are both sales originated in foreign subsidiaries and direct exports from the U.K.(2). The values range from a minimum of 4 percent to a maximum of 91 percent, with an average of 43.1 percent. Table 9.IV shows the distribution of companies by four categories, indicating different levels of commitment to foreign operations: 13 companies (i.e 14 percent of the total number of firms) have overseas sales of less than 20 percent of their total turnover (small commitment); 29 companies (i.e 32 percent) generate abroad between 21 and 40 percent of their total revenue (medium commitment); 26 firms (i.e 29 percent) between 41 and 60 percent (large commitment), and 22 companies (i.e. 24 percent) have overseas sales of more than 60 percent of total turnover (very large commitment).

The other method of measuring a firm's commitment to foreign operations is the percentage of assets located outside the U.K. to group total assets, at the last accounting year-end. Values range from 2 percent in the company with the lowest involvement overseas to 90 percent in the company with the highest involvement, with an average of 38.6 percent. According to Table 9.V, for 21 firms (i.e. 24 percent of the relevant cases) assets abroad represent only 20 percent or less of group total assets (small commitment); for 37 corporations (i.e. 42 percent) assets abroad are between 21 and 40 percent of total assets (medium commitment); for 19 firms (i.e. 22 percent) foreign assets are between 41 and 60 percent (large commitment); and for 11 companies (i.e 13 percent) assets outside the U.K. represent 60 percent or more of total assets (very large commitment). Among these latter, 3 companies have overseas assets of more than 80 percent of the total.

Table 9.IV - Percentage of Sales Achieved by Sample Firms in Foreign Markets to Group Consolidated Sales

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
-20%	13	14.4	14.4
21% - 40%	29	32.2	46.7
41% - 60%	26	28.9	75.6
61%+	22	24.4	100.0
Not determined	7	MISSING	100.0
TOTAL	97	100.0	

N = 90

MAXIMUM 91.00 MINIMUM 4.00
MEAN 43.08 STD DEV 20.97

Table 9.V - Percentage of Assets Located Outside the U.K. to Group Total Assets in Sample Firms

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
-20%	21	23.9	23.9
21% - 40%	37	42.0	65.9
41% - 60%	19	21.6	87.5
61%+	11	12.5	100.0
Not determined	9	MISSING	100.0
TOTAL	97	100.0	

N = 88

MAXIMUM 90.00 MINIMUM 2.00
MEAN 38.57 STD DEV 20.21

9.2.4. Level of Companies' Internationalization

The level of a company's internationalization is measured in terms of the number of countries where the group maintains control over manufacturing (or other industrial) facilities, and the distribution of such countries over the different geographic areas of the world.

According to Table 9.VI, 34 companies (i.e. 35 percent of the relevant total) operate in 5 different countries or less (U.K. excluded). These are firms with a low level of internationalization. Twenty-nine companies (i.e. 30 percent) have industrial facilities in 6-10 countries (medium level of internationalization). Sixteen corporations (i.e. 17 percent) operate in 11-15 different countries (high level of internationalization), and 17 companies (i.e. 18 percent) have industrial facilities in more than 16 countries (very high level of internationalization).

Results concerning the number of geographic areas where companies operate are shown in Tables 9.VII and 9.VIII. The world was divided into seven different geographic regions, namely Europe (U.K. not included), United States & Canada, Latin America, Africa, Middle East, Asia, and Australia & New Zealand. The criterion used to define geographic areas sought to ensure for each area a certain homogeneity in the characteristics of the economic, political, legal, and social environments.

Table 9.VII provides the total number of companies which operate in each geographic area. It also provides for each area the average number of countries where companies own industrial facilities, as well as the maximum and minimum observation, and a measure of dispersion. It is noteworthy that the great majority of companies are established in the U.S. or Canada (81 percent of the total), and in Europe (78 percent). Also Australia & New Zealand, and Africa are areas where more than half of the companies operate. In contrast, the Middle East and Latin America are regions with a very low incidence, with only 25 and 34 percent of the sample companies, respectively, operating there.

Table 9.VI - Number of Foreign Countries in Which Sample Firms Maintain Control Over Industrial Operations

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
-5	34	35.4	35.4
6 - 10	29	30.2	65.6
11 - 15	16	16.7	82.3
16+	17	17.7	100.0
Not determined	1	MISSING	100.0
TOTAL	97	100.0	

N = 96 MAXIMUM 43 MINIMUM 1 MEAN 10.06 STD DEV 8.44

Table 9.VII - Geographical Distribution of Foreign Operations in Sample Firms

	Europe	U.S. & Canada	Latin America	Africa	Middle East	Asia	Australia & N.Zeal.
Number of <u>companies</u> operating in geographic area N (no. of valid cases) = 96	76 (78%)	79 (81%)	33 (34%)	62 (64%)	24 (25%)	46 (47%)	65 (67%)
Number of <u>countries</u> where companies own industrial facilities:							
Maximum	15	2	8	8	6	10	2
Minimum	1	1	1	1	1	1	1
Mean	3.8	1.6	2.2	2.6	2.8	3.2	1.5
Standard Deviation	3.2	0.5	1.7	2.1	1.6	2.2	0.5
N (no. of valid cases)	76	79	33	62	24	46	65

It can be established that the higher the number of geographic areas where a company operates, the higher is its level of internationalization. According to Table 9.VIII only 7 firms (i.e. 7 percent) operate in a single geographic area. Twenty-seven companies (i.e. 28 percent) operate in 2-3 different areas. Twenty-eight companies (i.e. 29 percent) in 4 different areas. Twenty-six (i.e. 27 percent) in 5-6 areas, and 8 companies (i.e. 8 percent) operate in all the 7 geographic areas of the globe.

9.2.5. Companies' International Experience

The number of years companies have been established overseas provides a measure of their international experience. Table 9.IX shows when companies established their first manufacturing (or other industrial) operation outside the U.K. About one-third of the sample (31 companies) set up their first subsidiary between World War II and 1960. Thirty-seven firms (i.e. 40 percent) did it before the second World War, and 25 corporations (i.e. 27 percent) became multinational only during the 1960s or more recently.

9.2.6. Organizational Structure

The way in which companies are structurally organized is another variable thought to be of relevance for the study. Firms were classified according to the typology defined by Channon [1973], which seems to be particularly suited to the case of the British MNC.

A vast number of companies in the sample - 40 (i.e. 41 percent) - recognized to have a holding company structure, being organized by their separate subsidiaries - see Table 9.X. The second most popular form of structure, is the organization by product in the domestic market and by geographic area in overseas markets; 19 firms (i.e. 20 percent) have this type of structure. Next come two other forms of

Table 9.VIII - Number of Geographic Areas in Which Sample Firms Maintain Control Over Industrial Operations

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
One geographic area	7	7.3	7.3
Two geographic areas	16	16.7	24.0
Three geographic areas	11	11.5	35.4
Four geographic areas	28	29.2	64.6
Five geographic areas	11	11.5	76.0
Six geographic areas	15	15.6	91.7
Seven geographic areas	8	8.3	100.0
Not determined	1	MISSING	100.0
TOTAL	97	100.0	

N = 96

MEAN 3.97 STD DEV 1.76

Table 9.IX - Date of Establishment of Sample Firms' First Industrial Operation Outside the U.K.

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Before 1900	10	10.8	10.8
Between 1900 and W.W.II	27	29.0	39.8
Between W.W.II and 1960	31	33.3	73.1
During the 1960s	11	11.8	84.9
During the early 1970s	5	5.4	90.3
During the late 1970s	7	7.5	97.8
In the 1980s	2	2.2	100.0
Not determined	4	MISSING	100.0
TOTAL	97	100.0	

N = 93

MEDIAN Between W.W.II and 1960

multidivisional structure, namely the company-wide organization by product - 11 companies (i.e. 11 percent) - and the organization by international division for overseas operations - 10 firms (i.e. 10 percent). To be noted that 4 corporations (i.e. 4 percent) have a matrix or grid structure, this being generally associated with more complex and sophisticated forms of organizational structure.

9.2.7. Exposure to Host Country and Government Influence

Some companies whose products are of strategic importance to host countries are particularly exposed to local government influence in their overseas operations. A high degree of exposure to host country and government influence may also affect companies which have as their major international costumers national governments or state-controlled organizations.

A scale of 1 to 5 was used in the questionnaire to determine the level of exposure perceived by the respondent. Table 9.XI tabulates the results. For slightly more than half of the companies (50 firms) exposure to host country and government influence is considered to be lower than moderate. For 22 firms (i.e. 23 percent), exposure is moderate, and for another 22 companies (i.e. 23 percent) exposure is perceived as higher than moderate.

9.2.8. Degree of Strategic Control Exercised by Headquarters Over Subsidiaries

Another important company characteristic, thought to be of consequence for the study, is the degree of control exercised by headquarters over foreign subsidiaries as far as policy and strategic decisions are concerned. These include, basically, decisions involving definition of product markets and of key products in subsidiaries, allocation of resources, expansion and diversification of subsidiary operations, and choice of technology in subsidiaries.

Table 9.X - Organizational Structure of the Sample Firms

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	ADJ FREQ FOR EACH GROUP (PERCENT)
Holding company structure	40	41.2	41.2
Functional structure	1	1.0	1.0
Multidivisional structure :			
. Company-wide by product	11	11.3	
. Company-wide by geographic area	9	9.3	
. By product in the domestic market and by geographic area in overseas markets	19	19.6	
. By international division for overseas operations	10	10.3	
. Matrix or grid	4	4.1	54.6
Other	3	3.1	3.1
TOTAL	97	100.0	100.0

N = 97

**Table 9.XI - Degree of Exposure to Host Country and Government
Influence in Foreign Operations of Sample Firms**

		ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Low	1	30	31.9	31.9
	2	20	21.3	53.2
Moderate	3	22	23.4	76.6
	4	17	18.1	94.7
High	5	5	5.3	100.0
Not determined		3	MISSING	100.0
TOTAL		97	100.0	

N = 94

MEDIAN 2.35

Respondents were asked to rate the degree of control in their companies using a scale of 1 (loose control) to 5 (tight control). Results show that only 9 firms (i.e. 9 percent) exert a relatively loose control (ratings of 1 and 2) over foreign subsidiaries - Table 9.XII. In contrast, 65 companies (i.e. 68 percent) exercise a relatively tight control (ratings of 4 and 5) over foreign operations, while in 22 corporations (i.e. 23 percent) the level of control is considered to be moderate (rated 3 in scale).

9.2.9. Corporate Strategy

For purposes of this study corporate strategy is defined according to the way manufacturing (or other industrial) activity is organized internationally in a MNC. Following an adaptation of Doz [1980] typology, firms are classified into four categories each representing a distinct strategy.

Table 9.XIII shows that the majority of companies - 60 (i.e. 67 percent) - have a pure segmented nation-for-nation strategy, which means that manufacturing is based on local plants, substantially independent of each other, and serving primarily the local markets. This strategy involves a very low volume of intersubsidiary transfers. On the other extreme, there are 4 companies (i.e. 4 percent) which have a pure global integration strategy, where manufacturing is integrated on a worldwide or regional (e.g. EEC) basis, with a substantial volume of components, semi finished, and/or finished products being moved between plants located in different countries. A global integration strategy is difficult to find in its pure form, since elements of a segmented nation-for-nation strategy are likely to be present at least in part of a company's organization of international manufacturing activities. For this reason, two mixed strategies have been considered in the study. One is defined as having a higher propensity to a segmented nation-for-nation strategy, the other is defined as tending to a higher propensity to a global integration strategy. The latter form of strategy was found in 7 companies (i.e. 8 percent), while the former was encountered in 19

Table 9.XII - Degree of Strategic Control Exercised by Headquarters Over Foreign Subsidiaries in Sample Firms

		ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Loose	1	3	3.1	3.1
	2	6	6.2	9.4
Moderate	3	22	22.9	32.3
	4	37	38.5	70.8
Tight	5	28	29.2	100.0
Not determined		1	MISSING	100.0
TOTAL		97	100.0	

N = 96

MEDIAN 3.96

Table 9.XIII - Strategies Followed by Sample Firms in the Organization of Their International Manufacturing Activities

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Segmented nation-for-nation strategy	60	66.7	66.7
Mixed strategy with a higher propensity to a segmented nation-for-nation strategy	19	21.1	87.8
Mixed strategy with a higher propensity to a global integration strategy	7	7.8	95.6
Global integration strategy	4	4.4	100.0
Not determined	7	MISSING	100.0
TOTAL	97	100.0	

N = 90

MEDIAN: Segmented nation-for-nation strategy

firms (i.e. 21 percent). In aggregate, there are 30 corporations (i.e. one third of the total) which have some form of global integration. Among them, in 11 cases, (i.e. 12 percent of the total) the integration of international manufacturing activities on a global basis takes a dominant part in the firms' overall strategy.

9.2.10. Corporate International Philosophy

This variable results from the aggregation of two other variables previously discussed: the degree of strategic control exercised by headquarters over foreign subsidiaries, and the form of corporate strategy adopted by the company. Exhibit 9.I depicts the relationships between the five degrees of strategic control exercised by the headquarters of a MNC and the four possible forms of organization of its international industrial activities. The terminology used was introduced by Perlmutter [1969], and subsequently developed by Rutenberg [1982], although their definition of terms is somewhat different from the one adopted here.

Companies with high levels of control and a segmented nation-for-nation strategy, i.e. ethnocentric companies, are, by far, the largest group, representing 42 percent of the sample (37 cases) - see Table 9.XIV. Firms with moderate to low levels of control and a segmented strategy, polycentric companies, account for 25 percent of the total (22 cases). Among the 30 corporations which have some form of global integration strategy (either in its pure form, or mixed with a segmented strategy), 11 companies (i.e. 12 percent of the total sample) are geocentric, 16 firms (i.e. 18 percent) are ethnocentric-geocentric, and only 3 corporations (i.e. 3 percent) are polycentric-geocentric - see Exhibit 9.I, for a definition of these classes.

Table 9.XIV - Corporate International Philosophy of Sample Firms

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)
Ethnocentric	37	41.6
Polycentric	22	24.7
Ethnocentric/Geocentric	16	18.0
Polycentric/Geocentric	3	3.4
Geocentric	11	12.4
Not determined	8	MISSING
TOTAL	97	100.0

N = 89

Exhibit 9.I - Definition of a Typology for Corporate International Philosophy in Multinational Companies

		S T R A T E G Y			
		Segmented nation-for- nation	Mixed with propensity to segmented	Mixed with propensity to global	Global integration
C O N T R O L	5 Tight	ETHNOCENTRIC	ETHNOCENTRIC - GEOCENTRIC	G E O C E N T R I C	
	4				
	3 Moderate				
	2				
	1 Loose	POLYCENTRIC	POLYCENTRIC - GEOCENTRIC	Nonsensical Area	

9.3. Summary

The 97 companies participating in the present study have just been described in terms of ten major characteristics, involving thirteen different variables.

This summary section describes the modal company and the average company, and attempts to provide an idea of the dispersion of occurrences for the quantitative variables. From an analysis of the results reported in the chapter, it can be concluded that the modal company is established internationally in the mechanical engineering business, has consolidated sales between £201 million and £500 million, and consolidated net assets of £100 million or less; it originates abroad between 21 and 40 percent of its total revenue, and has 21 to 40 percent of its total assets located outside the U.K. This hypothetical firm is established in 5 countries or less, and operates in 4 different regions of the world. Its first manufacturing subsidiary was established between the second World War and 1960. The group is organized in the holding company structure. The level of exposure to host country and government influence is low, the degree of control exercised by headquarters over foreign subsidiaries is relatively tight, and the way in which international industrial activities are organized indicates that the company practices a segmented nation-for-nation strategy. Its corporate philosophy is associated with the ethnocentric type.

The average firm has total consolidated sales amounting to £953 million (standard deviation (SD) = 2195), and total consolidated net assets of £463 million (SD = 1281). It generates abroad 43 percent (SD = 21) of its total revenues, and has 39 percent (SD = 20) of its assets located overseas. This firm operates in 10 countries (SD = 8.4), and its activities are spread over 4 geographic areas of the world (SD = 1.8). Its exposure to local influences approaches the medium level (median of 2.4 in a 1-5 scale), and the degree of control exercised by headquarters over subsidiaries is higher than moderate (median of 4.0 in a 1-5 scale).

Footnotes:

- (1) This figure refers to a MNC situated beyond the 500 largest companies mark which was exceptionally included in the survey results. The firm was contacted during the pilot of the questionnaire and its financial director interviewed. Due to the fact that the questionnaire had been successfully completed, and that the corporation was not very far from the cut-off level defined for the survey population, it was decided to include the company in the study.
- (2) For some companies it was not possible to determine whether the amount of foreign sales disclosed in the annual report included the amount of direct exports from the U.K. In such cases, the value disclosed in the report as sales abroad (irrespective of being sales by origin or sales by destination) was accepted.

CHAPTER 10 - THE COLLECTION AND ANALYSIS OF FOREIGN ENVIRONMENTAL INFORMATION BY GROUP'S HEADQUARTERS

10.1. Introduction

This chapter examines how, and to which extent headquarters collect and analyse information about foreign environments characteristic to host countries where companies already operate or expect to operate. Such information relates to various different aspects, namely economic (e.g. inflation, labour costs), political/legal (e.g. political risk, taxes), and social/cultural (e.g. strikes, attitudes). The use of environmental information is interpreted here in broad terms, and is not restricted to the context of subsidiary performance evaluation.

The chapter is structured in two major sections. The first, describes how the process of collecting and analysing information about foreign environments is organized in the headquarters of multinationals, what the information is essentially used for, which major characteristics of the local environments are subject to analysis, and which sources of information are predominant. The second section explores relationships between the way in which environmental information is processed and companies' characteristics included as independent or explanatory variables in the study.

10.2. Report on Companies' Practices

10.2.1. Organization of the Environmental Assessment Activity

A first major concern of the study was to identify how foreign environmental information is collected and analysed in companies' headquarters, and how such activity is organized within parent companies. A primary objective was to discover whether the collection and analysis of information on foreign environments is formally set up, giving rise to an institutionalized function. As described in chapter 3 (section 3.4.), there is a paucity of information on the environmental assessment practices of British MNCs. The evidence from the U.S. points to a growing number of multinationals which have institutionalized in headquarters an environmental scanning activity, creating for that purpose a new organizational function.

The results obtained from the companies studied show that in as many as 80 percent of all cases (i.e. 76 firms) foreign environmental information is usually processed (collected and analysed) in headquarters - see Table 10.I. Among these, only 18 percent of the total respondents (17 firms), however, have the activity organized on a formal basis, with one or more managers being assigned formal responsibility for processing foreign environment information. In the vast majority of the cases (62 percent of the total), environmental information is regularly collected and analysed but no one in headquarters has been given formal responsibility for this. Here, information concerning conditions faced by companies overseas is collected and analysed only on an informal basis. Interviews carried out with company directors tend to confirm, in these cases, the non-existence of an institutionalized function of environmental assessment and suggest that, for such companies, the use of environmental information is motivated by the necessity to react to particular needs, rather than by a deliberate choice of proactively scanning the environments.

Table 10.I - How Foreign Environmental Information is Collected and Analysed in Companies' Headquarters

	ABSOLUTE FREQ.	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ.FREQ. (PERCENT)
There are one or more managers with formal responsibility for collecting & analysing f.e.i.	17	17.9	17.9
F.e.i. is usually collected & analysed but nobody has formal responsibility for this.	59	62.1	80.0
The collection & analysis of f.e.i. is not usually carried out either on a formal or informal basis.	19	20.0	100.0
Not determined.	2	MISSING	100.0
TOTAL	97	100.0	

N (number of valid cases) = 95

KEY: f.e.i. = foreign environmental information

Table 10.II - Reasons That Motivate the Collection and Analysis of Foreign Environmental Information in Companies' Headquarters

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Assessment of f.e. conditions only when the firm is considering new investments.	0	0.0	0.0
Monitoring of f.e. conditions only for existing operations.	8	10.7	10.7
Both	65	86.7	97.3
Other purposes - (Environmental scanning on a worldwide basis; & construction tenders)	2	2.7	100.0
Not determined	3	MISSING	100.0
Not applicable	19	MISSING	100.0
TOTAL	97	100.0	

N = 75

KEY: f.e.= foreign environmental

The collection and analysis of environmental information may be motivated basically by two different reasons: the need to assess conditions in countries where companies are considering to invest, and/or the necessity to monitor conditions in countries where firms already operate. Table 10.II shows that in most firms (87 percent of the applicable cases) the collection and analysis of foreign environmental information is motivated by both reasons taken together, and that in only a minority (11 percent) the collection and analysis of foreign environmental information is geared exclusively to the monitoring of conditions in countries where companies are already established.

Among the 17 companies that have institutionalized the environmental assessment function, only four have at least one professional involved in the analysis and/or collection of environmental information on a full-time basis. In the other corporations the individuals formally responsible for the assessment of environmental information perform this task only as part of their responsibilities. Table 10.III lists for these companies the number of people involved in this function on a part- and full-time basis.

In firms with more than one person performing the function, the environmental assessment activity may be undertaken either on an individual or on a team basis. Professionals formally responsible for the collection and analysis of environmental information can be found almost anywhere in headquarters' organizational structure. Table 10.IV shows where these individuals are actually located. In 14 companies (i.e. 82 percent of the relevant cases) the planning department has at least one person who is formally responsible for monitoring overseas information. An individual (or individuals) with similar responsibilities is encountered in the finance/control department in 12 of the firms (i.e. 71 percent). Professionals with such responsibilities are also found in other sub-units, although in a much lesser extent: for example, in 6 companies (35 percent of the cases) the environmental assessment function can be found in product divisions; in 3 corporations (18 percent) this function is directly linked to the board of directors, presumably as an advisory staff organ. In general, the way in which the environmental assessment

Table 10.III - Number of People Formally Involved in HQ in the Collection and Analysis of Foreign Environmental Information

NUMBER OF PEOPLE INVOLVED IN :	NUMBER OF COMPANIES	MEAN	STANDARD DEVIATION
FULL-TIME:			
0	12	0.63	1.36
1	1		
2	2		
5	1		
Not determined	1		
TOTAL		17	
PART-TIME:			
0	1	3.64	3.18
1 - 3	8		
4 - 6	3		
7 +	2		
Not determined	3		
TOTAL		17	

Table 10.IV - Organizational Subunits in HQ Which Have One or More People Formally Charged With the Task of Collecting and/or Analysing Foreign Environmental Information

	NUMBER OF PEOPLE	PCT OF RESPONSES	PCT OF CASES
Finance/Control	12	27.3	70.6
Planning	14	31.8	82.4
Legal	2	4.5	11.8
International Division	5	11.4	29.4
Product Divisions	6	13.6	35.3
Public Affairs	1	2.3	5.9
Board of Directors	3	6.8	17.6
Others - (Regional Co-Ordinations)	1	2.3	5.9
TOTAL RESPONSES		44	100.0

N = 17

function is organized and its dimension vary greatly from company to company. In its simplest form, the function is performed by one member of the planning department with part-time responsibilities for the collection of country information. In its most complex forms the function can be rather sophisticated and comprehensive. In one case observed, one of the largest U.K. companies, there are five analysts permanently engaged in the collection and analysis of information on overseas environments. They constitute a team organized formally in a service which is linked to the company's planning division. In another case, a fairly large consumer goods manufacturer, the assessment of environmental information is carried out by twelve managers as part of their responsibilities. These people are spread through five different organizational subunits, namely the finance/control division, the planning division, the legal division, the international, and the product divisions. These managers tend to conduct their analyses independently of one another, though on certain occasions they may pool resources and act as teams.

10.2.2. Nature of the Environmental Information Processed

The nature of the environmental information processed in companies' headquarters is rather comprehensive. It covers not only information of an economic nature (such as exchange rates, inflation rates, market size, cost of production inputs, country economic growth), but also non-economic information, mainly political/legal (e.g. political stability and risk, exchange controls, restrictions on profit remittances, taxation, incentives offered by governments), and social/cultural information (e.g. labour strikes and social unrest, attitude towards achievement and work, attitude towards foreign companies, language and other cultural factors).

The relative importance of each of these three types of information, was determined by the inclusion of a five-point scale in the questionnaire (1= not important; 5= very important). From the analysis of Table 10.V, it can be concluded that economic information and political/legal information are generally considered more

Table 10.V - Relative Importance of Different Types of Environmental Information Processed by Headquarters

NATURE OF INFORMATION PROCESSED	NEW INVESTMENTS						EXISTING OPERATIONS							
	Rating						Rating							
	Statist.						Statist.							
Economic	1	2	3	4	5	Median	N	1	2	3	4	5	Median	N
	1	1	7	18	39	4.65	66	1	5	17	15	36	4.43	74
	13.6%						31.1%						68.9%	
Political/ Legal	1	1	7	13	43	4.74	65	3	3	20	21	26	4.00	73
	13.8%						35.6%						64.4%	
	86.2%						68.9%							
Social/ Cultural	3	5	12	17	27	4.21	64	4	18	23	14	13	3.11	72
	31.2%						62.5%						37.5%	
	68.8%						68.9%							

NOTES:.. Absolute frequencies are provided for each rating in the 1 to 5 scale.

. Adjusted relative frequencies (percentages) are provided in cumulative form for rates 1-3 and 4-5.

. Key to rating: 1=Not important; 3=Moderately important; 5=Very important.

. Key to symbols: N=number of valid cases.

. The difference of 8 cases between N for new investments and N for existing operations is due to the fact that eight companies process environmental information only for countries where they are already established

important than social/cultural information. In fact, for new investments economic and political/legal types of information were regarded as either important (rated 4 in scale) or very important (rated 5) in 86 percent of the cases, whereas social/cultural information was given that level of importance in only 69 percent of the cases. For existing operations the difference is even higher: more than 64 percent of the companies considered economic and political/legal information important or very important, as compared to 38 percent for social/cultural information. Another conclusion suggested by Table 10.V is that economic and non-economic types of environmental information are generally regarded as more important for new investments than for existing operations.

In order to determine whether such differences are statistically significant, tests of hypotheses which compare ranks were performed for groups of two variables. The statistic used was the Wilcoxon matched pairs signed-ranks test. This statistical approach appears to be particularly suitable in the present case since the variables under scrutiny are at the ordinal-level of measurement, and the situation to be analysed fits the model of test of differences for two related samples [e.g. Siegel, 1956, pp.75-83]. Table 10.VI shows for each couple of variables under comparison the number of cases included in the test, the value of Z to which the calculation of the Wilcoxon test is referred [Siegel, 1956, p.79; Hull and Nie, 1981, p.228] and the two-tailed probability, that is the probability of drawing by chance from the population any two samples that differ more than the pair actually drawn. The statistical analysis reported here confirms the observations previously made when discussing Table 10.V. In fact, there is a statistically significant difference (at the level of 0.1 percent or less) either between economic information and social/cultural information, or between political/legal and social/cultural information, both for new investments and for existing operations (see Table 10.VI). There is also a statistically significant difference between the importance attributed to each type of information when used for new investments and when used for existing operations (probabilities of 0.5 percent and 0.099 percent or less, according to Table 10.VI).

Table 10.VI - Wilcoxon Matched-Pairs Signed-Ranks Test to Compare the Differences in Importance Attributed to Various Types of Information Processed by HQ

	CASES	Z	TWO-TAILED PROBABILITY
NEW INVESTMENTS			
Economic Information Social/Cultural Info.	64	-3.450	(0.001) **
Political/Legal Info. Social/Cultural Info.	64	-4.235	(0.000) **
Economic Information Political/Legal Info.	65	-0.673	(0.501)
EXISTING OPERATIONS			
Economic Information Social/Cultural Info.	72	-5.000	(0.000) **
Political/Legal Info. Social/Cultural Info.	72	-4.577	(0.000) **
Economic Information Political/Legal Info.	73	-1.342	(0.180)
Economic Information : -New Investments -Existing Operations	66	-2.781	(0.005) **
Political/Legal Info. : -New Investments -Existing Operations	65	-4.465	(0.000) **
Social/Cultural Info. : -New Investments -Existing Operations	64	-4.335	(0.000) **

NOTE : ** significant $p < 0.01$ (i.e. 1%)

10.2.3. Sources from which Environmental Information is Collected

Foreign environmental information is collected from a wide range of different sources. Sources of information that are internal to the firms, i.e. subsidiary managers and headquarters executives (via, for example, personal visits to locations), are by far the most used and the most highly rated in importance. In fact, an inspection of Table 10.VII reveals that the only sources of information that are regularly used in virtually all the companies surveyed are subsidiary and headquarters executives (internal sources). These were regarded as either important or very important sources of information in respectively 79 and 75 percent of the cases. All the other sources (external) were attributed comparable high ratings in only a minority of cases. Among the external sources of information, banks and business periodicals & media in general are the most used and those generally considered of higher importance (median ratings of 2.8 in both cases). Next come specialized publications, including country reports by organizations such as "Business International", "The Economist Intelligence Unit", "Business Environment Risk Information" (BERI), and country risk indices like BERI and PSSI (Political System Stability Index). These specialized publications are used in 55 companies. Other firms and British embassies & local chambers of commerce are sources also widely used on a regular basis. In the bottom of the list come the British Overseas Trade Board and international organizations such as the United Nations, The Organization for Economic Cooperation and Development, and the International Monetary Fund which are used in less than 50 firms - see Table 10.VII.

The interviews conducted with company directors tended to support the findings reported above, in that there seems to be a marked preference for internal sources of information. Environmental information may be reported either on a formal basis through established channels created between headquarters and subsidiaries, i.e. the internal reporting system, or on an informal basis through communication networks involving many people, generally using personal contacts and the telephone. Both aspects will be discussed and analysed in later

Table 10.VII - Sources of Foreign Environmental Information

SOURCES OF FOREIGN ENVIRONMENTAL INFORMATION		NOT USED	USED						
			Total N	Rating					
				1	2	3	4	5	Median
INTERNAL	Subsidiary managers	0	76	2	3	11	19	41	4.57
		0%	100%	21.1%			78.9%		
	Headquarters executives	0	76	2	3	14	26	31	4.23
		0%	100%	25.0%			75.0%		
EXTERNAL	Banks	2	74	7	17	38	10	2	2.84
		3%	97%	83.8%			16.2%		
	Business periodicals & media in general	1	75	11	16	33	12	3	2.82
		1%	99%	80.0%			20.0%		
	Specialized publications (e.g. B.I., E.I.U.)	21	55	14	13	21	6	1	2.52
		28%	72%	87.3%			12.7%		
	British embassies & local chambers of commerce	25	51	17	17	15	2	0	2.00
		33%	67%	96.1%			3.9%		
	Other firms	25	51	16	20	10	4	1	1.98
		33%	67%	90.2%			9.8%		
British Overseas Trade Board	32	44	21	13	7	3	0	1.58	
	42%	58%	93.2%			6.8%			
International organisations (e.g. U.N., I.M.F.)	27	49	28	13	5	3	0	1.38	
	36%	64%	93.9%			6.1%			
Others - several specified	-	7	0	1	3	3	0	--	

NOTES: Absolute frequencies are provided for each rating in the 1 to 5 scale.

Adjusted relative frequencies (percentages) are provided in cumulative form for rates 1-3 and 4-5.

Key to rating: 1=Not important; 3=Moderately important; 5=Very important.

chapters of the study. One particular point emerging from the interviews is that sources of information external to the firm generally complement one another, constituting a pool of valuable information when taken as a whole. For this reason, the reading of the relative importance attributed individually to each external source of information should be made with some care.

10.2.4. Major uses for Environmental Information

The integration of the environmental assessment process into decision making is reflected in Table 10.VIII, which shows the major uses within headquarters for information on overseas environments. Generally, environmental information tends to support a widespread range of decisions made in companies' headquarters. A very large proportion of companies reported the use of environmental information in decisions regarding control and evaluation of their existing operations (93 percent of total respondents, i.e. 71 companies), initial investments in new countries (87 percent), and expansion investments in countries where companies are already located (83 percent). Corporate strategic planning is also a user of foreign environmental information in 78 percent of the companies surveyed. A large proportion of firms (75 percent) also referred to disinvestment decisions as users of information about foreign countries. The lowest incidence of use for environmental information, among those listed in Table 10.VIII, are capital investment decisions involving replacement investments (in only 54 percent of the cases has environmental information been used for this purpose). Note, however, that even this is a reasonably high proportion.

Among the 71 corporations that reported the use of environmental information in the control and evaluation of overseas subsidiaries, 51 (i.e. 72 percent) said that data about foreign environments is used regularly as part of the continuous control and evaluation process of foreign subsidiaries' operating performance. In 19 cases (27 percent), environmental information is used in subsidiary performance evaluation only occasionally, when special circumstances either in the

**Table 10.VIII - Major Uses for Environmental Information Within
Companies' Headquarters**

	COUNT	PCT OF RESPONSES	PCT OF CASES
Capital investment decisions:			
- Initial investments	66	18.4	86.8
- Expansion investments	63	17.6	82.9
- Replacement investments	41	11.5	53.9
Disinvestment decisions	57	15.9	75.0
Corporate strategic planning	59	16.5	77.6
Control and evaluation of existing operations	71	19.8	93.4
Other uses - (Trading & fiscal/legal structures)	1	0.3	1.3
TOTAL RESPONSES	358	100.0	

N = 76

company or in the host environments emerge.

10.2.5. Discussion and Conclusions

The importance of the environmental assessment activity for the success and eventual survival of a corporation was extensively discussed in Chapter 3. It was seen there that companies operating at a multinational scale are likely to be subject to a wide variety of environmental influences, the consequences of which for the companies' overall strategy indicate the need for an activity of collection and analysis of environmental information. A number of studies, centred on American MNCs, suggest that environmental scanning has evolved in its complexity and sophistication over the years. It appears that from very rudimentary systematic scanning methods and a reduced use of environmental information in decision making [e.g. Aharoni, 1966; Root, 1968b; Keegan, 1974], companies' processes gradually became more complex and formalized [LaPalombara and Blank, 1977], reaching a level of refinement and sophistication that implies the institutionalization in most companies of a formal function of collection and analysis of environmental information [Kobrin et al., 1980; Kennedy, 1984].

The present study shows that while 80 percent of the firms examined process foreign environmental information in headquarters, only less than 20 percent have the activity formally organized. The majority, in fact, collect and analyse environmental information only on an informal basis. This result suggests that the institutionalization of the environmental assessment activity is perhaps not so widespread among British MNCs as it is among American multinationals. As seen in Chapter 3, the recent surveys of Kobrin et al. [1980] and Kennedy [1984] revealed that the majority of the U.S. MNCs studied had already set up in headquarters a formal function whose purpose was to collect and analyse information on host environments.

In those British multinationals which have the environmental assessment function institutionalized, there are one or more individuals in the headquarters with formal responsibility for the

collection and analysis of environmental information. This task is, however, usually conducted as only part of their responsibilities. The ascertainment of the locus of the function in headquarters' organizational structure revealed that in most cases the planning and the finance/control departments have one or more professionals charged with the task of assessing foreign environments. In a few cases, bodies such as the international division, product divisions and the board of directors also have people formally engaged in environmental assessment.

The collection and analysis of environmental information in any company where this activity is carried out either formally or informally is normally generated by the need to assess conditions in countries where corporations are considering to invest, and by the necessity to monitor conditions in countries where firms already operate. Despite this dual role of the assessment function, environmental information is generally regarded as more important for new investments than for existing operations. As to the nature of the information processed, a wide ground is covered, including data on economic, political/legal, and social/cultural conditions in host countries. In general, economic and political/legal types of information are considered more important than information of a social/cultural nature. The sources from which environmental information is collected are varied, complementing each other in order to form a pool of data. Generally, sources internal to the firms (their managers) are more used and considered of a higher importance than external sources, such as banks, the media and specialized publications.

Having characterized the way in which the environmental assessment activity is organized, and also the nature and origin of the information processed, the section concluded with the determination of the major uses given to the environmental information. In almost every company that conducts the environmental assessment activity, environmental information is used in the control and evaluation of operations, normally as part of the continuous assessment process of subsidiaries' operating performance. Other activities and decisions use environmental information. Among these are capital investment

decisions in new locations, expansion investments, corporate strategic planning, and disinvestment decisions.

10.3. Findings on Foreign Environmental Assessment Practices and Companies' Characteristics

This section explores relationships between the different ways in which foreign environmental information is collected and analysed in headquarters and companies' characteristics, such as size, commitment to foreign operations, international experience, organizational structure, strategy, etc. (see chapter 9 for a detailed description of companies' characteristics).

Major hypotheses in the study are tested using a decision model that includes the formulation of null hypotheses for testing statistical significance [Lapin 1978, ch.9]. The decision model is composed of five elements: the null hypothesis (H_0), the alternative hypothesis (H_a), the statistical test, the level of significance (α), and the decision rule.

The first component of the decision model, the null hypothesis, will be explicitly stated for every test performed in the study. Whenever possible, the null hypothesis will be formulated in a directional form (i.e. $H_0: u_1 > u_2$ or $u_1 < u_2$, where u_1 and u_2 are values for a given statistic computed for two samples or populations under analysis). However, nondirectional hypotheses (i.e. $H_0: u_1 = u_2$) will be common in the study due to either difficulties encountered in anticipating the direction of the tests' outcomes, or the impossibility to test directional hypotheses when using certain statistical techniques, such as chi-square [Downie and Starry, 1977, ch.6].

The second component of the decision model, the alternative hypothesis, is simply the logical opposite of the null hypothesis. Hence, the presentation of a formal statement with the former is not considered necessary in the study.

The choice of the statistical test for testing H_0 , the third aspect in the decision model, will take into account for each case the specificity of the situation being analysed (e.g. independence between variables, comparison of sample means), the level of measurement (i.e. nominal, ordinal, interval, or ratio) at which the variables under scrutiny are situated, and the power and efficiency of the alternative statistics under consideration [Siegel, 1956, ch.3].

An essential component of the decision model is the cut-off level of significance (α) established for the test, which provides the probability of incurring in a Type I error. The most commonly used level of α is 0.05 [Emory, 1980, p.412], although any values less than 0.50 are permissible [Downie and Starry, 1977, p.70]. A common standard, very conservative in nature, is 0.01; studies sometimes adopt more generous significance levels in the region of 0.20 [e.g. Yunker, 1982]. In the present study, and unless otherwise stated, a statistical test will be regarded as significant when its significance level falls to the mark of 5 percent or less (i.e. $p \leq 0.05$).

Considering that null hypotheses will be stated in such a way as to make Type I errors the crucial error, the cut-off significance level adopted here is regarded as a fairly safe one (confidence level of 95 percent). As regards Type II errors, which are not under the direct control of the researcher, the relatively large sample sizes present in the study will hopefully guarantee an acceptably low probability of their incurrence.

The last component of the decision model, the decision rule, is intimately linked to the cut-off significance level that is set. Rejection or acceptance of a null hypothesis are a consequence of the position (higher or lower) of the significance level (p) computed for the statistic being utilized in relation to the cut-off significance level (α) previously adopted.

Major statistical tests exploring relationships between companies' practices and corporate characteristics will be presented in this and the next chapters. Each test will follow the decision model just described. In particular, a statement with the null hypothesis will be included in each case together with a discussion of the specific statistical techniques adopted.

Test 1

This test explores the relationships between the way in which the environmental assessment activity is organized in headquarters (i.e. whether or not the activity exists in the companies' headquarters and, if so, whether it is formally institutionalized), and the corporate characteristics of the respective companies. It is hypothesized, as a major relationship to be tested (see chapter 7), that corporations where collection and analysis of foreign environmental information has been institutionalized as a formal function, tend to be those which have adopted a corporate strategy which favours a global integration of manufacturing activity. It is also hypothesized that the way in which environmental assessment activity is organized is associated with the other company features selected for the study. For example, it is anticipated that multinationals with higher levels of commitment to foreign operations, or higher levels of internationalization tend to attach greater importance to environmental assessment, this being reflected in the existence of a formal function which collects and analyses information on overseas environments.

The null hypothesis states that:

- H₀₁: there is no association between the way in which the activity of collecting and analysing foreign environmental information is organized in headquarters and:**
- . the dominant industrial activity of the international operations of a company;**
 - . the size of a company;**
 - . the level of a company's commitment to foreign operations;**
 - . the level of a company's internationalization;**
 - . the international experience of a company;**
 - . the organizational structure of a company;**

- . the level of a company's exposure to host country and government influence;
- . the degree of strategic control exercised in a company by headquarters over foreign subsidiaries; and
- . the strategy adopted by a company.

In order to test independence between variables, chi-square (χ^2) was the statistical technique adopted because there is always at least one variable under scrutiny that is at the nominal-level of measurement. Chi-square belongs to the class of nonparametric, or distribution-free statistical tests and, therefore, it is free from the assumption of normally distributed populations [Lapin, 1978, ch.15].

One assumption generally specified for chi-square is that each expected cell frequency should be at least 5 when degrees of freedom (d.f.) are greater than 1, i.e. when contingency tables on which chi-square is based are larger than 2x2 [Lapin, 1978, p.507; Downie and Starry, 1977, pp.90-92]. Frequently, this is difficult to achieve and a vast literature recognizes that when d.f. > 1 "the χ^2 test may be used if fewer than 20 percent of the cells have an expected frequency of less than 5 and if no cell has an expected frequency of less than 1" [Siegel, 1956, p.110]. This recommendation is based on an investigation conducted by Cochran [1954], and can also be found, for example, in Emory [1980, p.416], and Keeping [1962, p.316].

If these requirements are not met by the data as they were originally collected, adjacent categories in either rows or columns may be combined in order to increase the expected frequencies in the critical cells [e.g. Siegel, 1956, p.110]. Combination of categories will be used in this study whenever necessary. For operational reasons, the chi-square statistic will be accepted when 22.2 percent of the expected frequencies are smaller than 5, provided that in these extreme cases the minimum expected cell frequency be substantially higher than 1 (i.e. in the region of 3 or 4).

As tests of independence, like chi-square, merely indicate the presence of association, not its magnitude, "post hoc" procedures to obtain a numerical estimate of the strength of the relationship become necessary [Downie and Starry, 1977, p.90 and ch.14]. As was mentioned before, in Test 1 there is always at least one variable under scrutiny that is at the nominal-level of measurement. The measures of association adopted here were Cramer's V, and the uncertainty coefficient (asymmetric). Cramer's V is a statistic based on chi-square which can be used when both variables are at the nominal-level. Cramer's V was selected for this study instead of the contingency coefficient, which is another statistic of the same type very often utilized in social research, because it has 1 as an upper limit. On the contrary, the contingency coefficient does not have a fixed upper limit, since this is determined in each case by the number of columns and rows [Downie and Starry, 1977, ch.14]. The uncertainty coefficient (asymmetric) is also used when both variables are at the nominal-level but, unlike Cramer's V, is based on the concept of proportional reduction in error, being therefore a probability statistic [Nie et al., 1975, ch.16]. The asymmetric value of the uncertainty coefficient may be understood as the proportion by which "uncertainty" in one of the variables (termed dependent for purposes of the test) is reduced by knowledge of the other variable (termed independent). The concept of uncertainty has been imported from information theory and relates to the ambiguity of data distributions.

Contingency tables relating the variables implied in the null hypothesis defined above were constructed, and summary statistics (notably chi-square) were computed. Table 10.IX presents in a condensed form the chi-square statistic and the respective level of significance computed for these variables. For reasons of clarity, the following account of the statistical results achieved will concentrate on those relationships proven to be statistically significant.

The most significant result was obtained between the organization of the environmental assessment activity and the strategy followed by companies in their international industrial activities. The chi-square

statistic for the two variables produced, according to the SPSS software, an extremely high significance level of 0.0000, which means that the probability of incurring in a Type I error (reject H_0 when H_0 is true), is less than 1 in 10,000. The strength of the association between the two variables is also substantial, with a Cramer's V of 0.497 and an uncertainty coefficient (asymmetric) of 0.132. An analysis of Table I in Appendix D which crosstabulates the two variables, shows that 81 percent of the companies where the environmental assessment function is institutionalized in headquarters are firms with some form of global integration of their manufacturing activities, i.e. are companies where the whole or part of their industrial activity is integrated on a worldwide or regional (e.g. EEC) basis, with substantial volume of components, semi-finished, and/or finished products moving between plants located in different countries. In contrast, 88 percent of the corporations where the collection and analysis of foreign environmental information is not usually carried out in headquarters either on a formal or informal basis, are firms with a segmented nation-for-nation strategy, i.e. are firms where manufacturing is based on local plants substantially independent of each other with a very low volume of intersubsidiary transfers. Companies whose organization of the environmental assessment activity fits in-between these two cases - firms where environmental information is collected and analysed in headquarters but only on an informal basis - tend to have a segmented nation-for-nation strategy (74 percent of the cases).

Another very significant result was obtained between the way in which the environmental assessment activity is organized and the level of a company's internationalization, measured by both the number of foreign countries and the number of major geographic areas in the world where companies maintain control over industrial operations. (see Table 10.IX). Analysis of the respective contingency tabulations (see Tables II and III in Appendix D) reveal that corporations with formally institutionalized functions tend very markedly to have high levels internationalization. In fact, 94 percent of the total number of firms which have in headquarters one or more managers with formal responsibility for collecting and analysing foreign environmental information, operate in six or more countries, spread over four or

Table 10.IX - Chi-Square Tests of Independence Between the Way in Which the Environmental Assessment Activity is Organized in HQ and Corporate Characteristics

VARIABLE NAME	Type of Industry	Company Size		Commitment to Foreign Operations		Internationali- zation		Interna- tional Experi- ence	Organi- zational Structure	Exposure to Host Country Influence	Control by HQ	Corpor- ate Strategy
		INDUSTRY	SIZSALE	SIZASSET	SALEOUT	ASSETOUT	N COUNTRY	NAREA	STRUCT	EXPOSURE	CONTROL	STRATEGY
VARIABLE NAME STAT.												
ENFCN		3.25	3.67	7.11	2.76	9.14	15.71	17.64	1.27	8.30	10.56	21.75
		(0.517)	(0.452)	(0.130)	(0.599)	(0.058)	(0.003)	(0.002)	(0.865)	(0.016)	(0.032)	(0.0000)
d.f.	4	4	4	4	4	4	4	4	4	2	4	2
N	95	95	95	95	88	86	94	94	91	92	94	88

NOTES: ** significant $p < 0.01$

* significant $0.01 < p < 0.05$

(a) chi-square subject to Yates's correction for continuity.

Key to acronyms and symbols: ENFCN = Environmental function - How foreign environmental information is collected and analysed in HQ.

χ^2 = chi-square statistic

p = level of significance

d.f. = degrees of freedom

N = number of valid cases

more geographic areas in the world. On the other hand, companies where the environmental assessment activity is non-existent in headquarters either on a formal or informal basis, tend to have a limited international involvement. In effect, 68 percent of the firms where environmental assessment activity is absent, are established in five or less countries, and in three or less geographic areas. Among those corporations where the environmental assessment activity exists in headquarters only on an informal basis, 65 percent operate in six or more countries and in four or more geographic areas.

Also associated with particular ways in which the environmental assessment activity is organized in headquarters is the degree of a company's exposure to host country and government influence in foreign operations (Table 10.IX). Multinationals in which the environmental assessment function has been formally set up in headquarters tend to have higher levels of exposure. Table IV in Appendix D shows that 71 percent of such firms perceive exposure to host country influence as medium (rated 3 in scale of 1 to 5) to high (rated 5 in scale). In contrast, 78 percent of those companies where environmental information is not collected or analysed in headquarters either formally or informally, perceive environmental exposure as low (rated 1 or 2 in scale). For those corporations where foreign environmental information is processed in headquarters only in an informal way, the degree of exposure is evenly distributed between the two categories (low, and medium to high).

Finally, the organization of the environmental assessment activity was also found to be associated with the degree of control exercised by headquarters over foreign subsidiaries, as far as policy and strategic decisions are concerned - e.g. decisions involving definition of key products in subsidiaries, allocation of resources, expansion and diversification of subsidiary operations. As Table V in Appendix D demonstrates, firms with formal environmental assessment functions tend to exert tight control over subsidiaries, whereas firms with no environmental assessment activity at all tend to have loose control over foreign operations. The great majority of firms where environmental information is collected and analysed (either on a formal or informal basis) exercise tight strategic control over

subsidiaries (rated 4 or 5 in a 1 to 5 scale). In contrast, among companies where environmental assessment is absent, the majority (53 percent) apply to subsidiaries loose to moderate levels of control (ratings of 1 to 3 in scale).

Tests of independence conducted between the organization of the environmental assessment activity and corporate characteristics that produced chi-square statistics with levels of significance situated above the cut-off point of 5 percent (Table 10.IX) cannot be used to reject the respective null hypothesis. In these cases, association between the relevant variables is not accepted.

Summary: Test 1 has shown that there is a statistically significant relationship between the way in which the environmental assessment activity is organized in companies' headquarters and: 1) the strategy followed by companies in the organization of their international industrial activities; 2) the degree of companies' internationalization; 3) the level of companies' exposure to host country and government influence in foreign operations; and 4) the degree of control exercised by parents over overseas subsidiaries as far as policy and strategic decisions are concerned. The very great majority of corporations where the environmental assessment function has been formally institutionalized in headquarters have some form of global integration of their international industrial activities, have high levels of internationalization (they operate in six or more countries, located in four or more world geographic areas), have higher levels of exposure to local conditions (they perceive exposure as medium to high), and practise a tighter strategic control over foreign subsidiaries (they exercise more than moderate control over their operations abroad). In contrast, those firms from which the environmental assessment activity is absent, even informally, tend very markedly to have a pure segmented nation-for-nation strategy, with international industrial activities based on local plants mainly independent of each other. They also tend to have lower levels of internationalization, lower degrees of exposure to local conditions, and closer strategic control over foreign subsidiaries.

These results show that it is those MNCs that are more likely to be affected by variations in the host environments (i.e. companies with global strategies, high levels of environmental exposure, and tight strategic control over subsidiaries), and that are subject to a higher environmental variation (i.e. companies operating in a larger number of countries and geographic areas) that the collection and analysis of foreign environmental information tends to be more sophisticated and formalized.

10.4. Summary and Conclusions

This first chapter of results introduced the organizational context of the environmental assessment activity in British MNCs. It was seen earlier in the discussion of the theoretical foundation of the study (Chapter 3), that environmental scanning, by helping to detect present and future threats and opportunities, is indispensable to the determination of the strategic direction of a corporation. In the particular case of MNCs, the diversity of environmental influences to which operations are subject, and the correspondence of this to the overall success of the companies, suggest an increased need for an activity of environmental assessment.

Scanning or assessment of the environment implies the collection and analysis of intelligence using methods that may vary greatly in their degree of formality and sophistication. The evidence from U.S.-based multinationals indicates that the environmental assessment activity has gradually grown in complexity and importance, reaching the stage where most large MNCs have already created in headquarters a formal environmental function. The results from the present study show that in only 18 percent of the companies the environmental assessment activity has been formally institutionalized. In the rest, the activity is either exercised on an informal basis (62 percent), or not exercised at all (20 percent). Although these findings are not directly comparable with those obtained in the American surveys, it

appears that a smaller proportion of British multinationals practice the environmental assessment activity on a formal basis than the MNCs originating from the U.S.

In the limited number of companies that have the activity formally organized, there are one or more headquarters' professionals with formal responsibility for the collection and analysis of environmental conditions encountered in countries where new investments are planned, or in territories already operated. Most of the times these people, who tend to be located in headquarters subunits such as the planning division and the finance/control department, process environmental information only as part of their responsibilities.

The American survey conducted by Kobrin et al. [1980] indicated that the institutionalization of the environmental assessment function occurred mainly in larger and more international companies, and also in firms operating in industries that were more susceptible of being affected by environmental influences. A statistical test conducted in the chapter (Test 1) attempted the definition of the profile of the companies which possess more elaborate and formalized activities of collection and analysis of environmental information. The results showed that firms in whose headquarters the environmental assessment function had been formally institutionalized tend to practise global integration strategies, have high levels of exposure to host country and government influence, exercise a tight strategic control over subsidiaries, and have high levels of internationalization (measured by the number of countries and world geographic areas operated). This indicates that high levels of sophistication present in the organization of the environmental assessment activity are linked to the vulnerability of the multinationals to the impact of foreign environments (for example are present mainly in companies with globally integrated industrial activities, and in firms highly exposed to local governments). The way in which the environmental activity is organized is also linked to the level of variation in the characteristics of the environments to which multinationals are subject (it is assumed that companies operating in a large number of countries spread over different geographic regions experience higher levels of environmental variation).

As to the nature of the information processed, the empirical studies reviewed in chapter 3 suggested that the collection and analysis of economic data usually preceded the use of information of a non-economic nature. The study revealed that among the companies that process environmental information, either formally or informally, non-economic data is widely used. Certain types of non-economic information, related to political and legal issues, were even generally considered as important as economic information. On the other hand, non-economic data regarding social and cultural issues were viewed as less important.

Environmental information is collected from a very wide range of sources, from which those internal to the companies are predominant. In effect, the study agrees in this respect with the findings of the American surveys, and in particular, with Kobrin et al. [1980], in the sense that interpersonnel communication among executives both in subsidiaries and headquarters is the preferred source of information on host environments. In addition to these, other sources external to the companies are also used. Among the most common are banks, the media in general, and specialized publications such as B.I., E.I.U., B.E.R.I., and P.S.S.I.

One aspect that did not emerge very clearly from the surveys reviewed in Chapter 3, was how the environmental information is integrated in the decision making process and, particularly, in the evaluation and control of foreign subsidiaries. The present study attempted to determine which major uses are given to the information retrieved in the environmental assessment activity. A widespread range of decisions were found to be supported by environmental information. The most common were major capital investment decisions, and control and evaluation of operations. This latter use is of particular interest to the study, and it is noteworthy that almost all the multinationals that centrally process foreign environmental information use it in subsidiary performance evaluation, either in a formal or informal way. In the majority of these cases, environmental information is used regularly as part of the continuous process of evaluation and control of overseas operations.

CHAPTER 11 - INTERNAL REPORTING SYSTEMS OPERATED BETWEEN FOREIGN SUBSIDIARIES AND GROUP'S HEADQUARTERS

11.1. Introduction

This chapter is primarily concerned with the flow of information reported internally by foreign subsidiaries to headquarters, through formal (i.e. institutionalized) channels. Such channels constitute the internal reporting system, whose contents include formal and standardized reports containing information of both quantitative and qualitative nature. As seen in chapter 4 (section 4.3.1.) the internal reporting system is normally based on the FIS in whose core lies accounting information. However, in most cases the internal reporting system is not circumscribed to information of a financial nature for non-financial information is also included in the system.

The design of a reporting system can be characterized as to the content, frequency and magnitude of reporting, and the degree of system standardization (chapter 4). In the present chapter the internal reporting systems operated between foreign affiliates and parents are described in terms of the above criteria. In particular, the report on companies' practices that follows will describe which items are included in the reporting systems, what the time interval between consecutive submission of these items is, how uniform reporting requirements for all foreign subsidiaries in a company are, and how reporting systems operated between foreign subsidiaries and headquarters differ from those operated between domestic divisions and headquarters.

11.2. Report on Companies' Practices

11.2.1. Content and Reporting Frequency of Internal Systems

The content of the internal reporting systems operated between foreign subsidiaries and headquarters for the companies participating in the study is presented in Table 11.I, which also includes information about the reporting frequency of each item. The table lists all the items specified in the questionnaire, classified according to their nature as financial and non-financial. It also includes under the category "others" those items not mentioned in the questionnaire but which were most frequently added to the list by respondents.

The incidence of financial items in the internal reporting systems is substantially higher than the incidence of non-financial items. All the reports of a financial nature that are listed in Table 11.I are included in almost every company surveyed. Balance sheets, profit and loss accounts, and reports on borrowings in subsidiaries from local sources are included in the reporting systems of virtually all the companies; up-dates of the year-end profit forecasts, and cash-flow statements are included in 99 percent of the cases; reports on sales per product or business, and up-dates of the budgeted year-end balance sheets are included in 96 and 89 percent of the cases respectively. On the other hand, the presence of non-financial reports in the reporting systems varies widely from item to item, ranging from a high of 87 percent for reports on economic conditions in host countries, to a low of 55 percent for reports on product quality - see Table 11.I.

The items included in the internal reporting systems operated between foreign subsidiaries and headquarters are subject to a great variation in reporting frequency. In general, financial items tend to be submitted by subsidiaries rather frequently. Reports on borrowings in subsidiaries from local sources are the item most often reported by foreign subsidiaries: in 87 companies (i.e. 90 percent of the cases which include this item in their reporting system) these reports are

Table 11.1 - Content and Frequency of Items Included in the Internal Reporting Systems

I T E M S	INCLUDED	NOT INCLUDED	R E P O R T I N G F R E Q U E N C Y							N		
			Only occa- sion.	Annually		Half Yearly		Quarterly	Monthly		Weekly	Other periods
FINANCIAL												
Balance sheet for the period	97 100%	0 0%	0	3	3.1%	5	28	60	0	1	97	
Up-date of the budgeted year-end balance sheet	85 89.5%	10 10.5%	7	7	7	7	42	19	0	3	85	
Profit and loss account	94 100%	0 0%	0	1	1.1%	0	11	81	0	1	94	
Up-date of the year-end profit forecasts	95 99%	1 1.0%	4	3	3	8	37	41	0	2	95	
Cash-flow generated in the subsidiary	96 99%	1 1.0%	0	0	1	1	24	67	3	1	96	
Sales per product or business	89 95.7%	4 4.3%	3	3	3.4%	2	12	69	0	0	89	
Borrowing in the subsidiary from local sources	97 100%	0 0%	0	0	0	0	9	74	13	1	97	
Inventory levels (in quantity)	70 73.7%	25 26.3%	8	2	2.9%	1	16	43	0	0	70	
Market share in host country	67 69.8%	29 30.2%	16	31	16.3%	1	12	7	0	0	67	
Production output	77 80.2%	19 19.8%	10	8	10.4%	0	13	46	0	0	77	
Manufacturing capacity utilization	68 70.8%	28 29.2%	17	11	16.2%	0	12	28	0	0	68	
Labour relations	55 57.3%	41 42.7%	32	5	9.1%	0	5	13	0	0	55	
Product quality	51 54.8%	42 45.2%	22	5	9.8%	0	10	14	0	0	51	
Report on economic conditions in host country	84 86.6%	13 13.4%	15	25	4.8%	4	20	18	0	2	84	
Report on political, legal, and social conditions in host country	76 80%	19 20.0%	23	28	36.8%	3	14	7	0	1	76	
Others : Capital expenditure	-	-	-	-	-	-	1	4	-	1	6	
Orders received	-	-	-	-	-	-	1	3	-	1	5	
Credit policy (co.debtors)	-	-	-	-	-	-	-	3	-	1	3	
Number of employees	-	-	-	-	-	-	2	3	-	6	6	
Other items	-	-	-	-	-	1	1	9	1	-	12	
NON-FINANCIAL												

NOTES: Absolute frequencies and adjusted relative frequencies (in percentage) are provided for each cell.
N represents the number of valid cases which include the item in their internal reporting system.

forwarded by subsidiaries once every month or week (Table 11.I). Next in frequency come profit and loss accounts, sales per product or business, and cash-flows generated in subsidiaries. The financial item that is reported less frequently relates to up-dates of the budgeted year-end balance sheets: in most cases such up-dates are submitted once every quarter or less often. (Table 11.I)

The reporting frequency of non-financial items included in companies' internal reporting systems varies widely from item to item. Inventory levels (in quantity) and production output are the reports submitted most frequently by foreign subsidiaries: the majority of companies have these items reported monthly - Table 11.I. In contrast, there are a number of items whose reporting frequency is very low. Market shares in host countries are forwarded once every year or only occasionally in 70 percent of all cases (i.e. 47 companies). Similarly, reports on labour relations, product quality, and political, legal and social conditions in host countries are, in the majority of cases, only reported annually or occasionally.

Of particular interest to this study are the incidence and reporting frequency of reports on economic and non-economic environmental conditions faced in host countries, forwarded by foreign subsidiaries to companies' headquarters. Reports on economic conditions are included in the internal reporting systems of the overwhelming majority of the companies (87 percent). Most often the item is reported regularly, for in only 18 percent of the cases is the item submitted on an occasional basis. As to the frequency with which reports on local economic conditions are forwarded, in nearly half of the cases (45 percent) the item is reported either every quarter or every month (Table 11.I).

The incidence and frequency of reports on political, legal and social conditions in host countries are lower than those found for reports on economic conditions. However, considering that these reports on non-economic conditions are of a specialized nature, it is noteworthy that the great majority of companies (80 percent of the total) include them formally in their internal reporting system. Among these firms, nearly one third request the item simply on an occasional basis, and

more than another third have it reported only every year. Therefore, and in contrast with the reports on economic environmental conditions, only a relatively small minority of companies have political, legal and social reports frequently submitted by foreign subsidiaries (Table 11.I).

Interviews with company executives carried out as a follow-up to the questionnaire tended to discover an increasing awareness on the part of headquarters executives towards the importance of reporting economic and non-economic environmental issues related to operating abroad. In one particular case, reports on economic conditions had just been introduced formally in the company's internal reporting system, and included the provision of a number of economic indicators as well as of more "soft" information. In another case, a company with extensive interests in plantations mainly in Africa and Asia, economic reports on local conditions have been a part of the reporting system for many years, however, only recently has the company started to request from the general managers of selected subsidiaries written information about the political, legal and social "climate" in the respective countries. The general impression collected from the interviews is that the request for economic information from subsidiaries tends to be long established in companies, whereas the request for political, legal and social information is a much more novel feature of companies' internal reporting systems. It has been observed in the interviews that the degree of detail and sophistication of the reports on economic and non-economic environments varies widely from company to company, and even within the same company it varies substantially from subsidiary to subsidiary. In most cases these reports are not standardized, and their level of detail is left to the discretion of subsidiary managers.

11.2.2. Standardization of the Internal Reporting Systems

The content and reporting frequency of the internal reporting systems operated between foreign subsidiaries and headquarters were

characterized for the typical (i.e. most common) case in each company(1). However, in some companies the characteristics of the internal reporting systems are likely to differ among foreign subsidiaries. Table 11.II attempts to portray the level of standardization of the companies' reporting requirements for overseas subsidiaries. Four different types of reporting requirements are considered: the number of formal reports required from subsidiaries, the content of such reports, the format (i.e. the way in which information is presented) of the reports, and the frequency (i.e. the time interval between consecutive submission of a same form) of the reports. The great majority of companies apply the same reporting requirements to all foreign subsidiaries. Only a small minority seems trying to adapt requirements to the specificity of subsidiaries (see Table 11.II).

Differences in format, despite being the most common change found in reporting requirements, were not considered in general particularly important, provided that the reports were able to supply all the requisite and necessary information. According to some managers: "format is not critical and we accept that most suited to local management needs"; "HQ is happy to extract the key data it needs from a format which suits the business and needs of each division"; "accounting format is a local management requirement for managing the local business and as long as certain minimum information is provided the precise format is not dictated". As to differences in number, frequency, and above all content of formal reports, company executives said that changes among subsidiaries were due primarily to the size of operations and the nature of subsidiaries' activity. Many companies specifically mentioned that small subsidiaries do not have the means to provide the level of information that is requested to major operations, and, therefore, they are assigned reduced reporting requirements. Another aspect frequently mentioned was that of materiality: smaller subsidiaries are relieved of some detail just because certain information is considered immaterial for the company as a whole. The nature of subsidiaries' activities was also said to influence the variability of reporting requirements: a number of firms operate simultaneously in several different businesses, and in these cases there is an evident necessity to adapt reporting requirements to

Table 11.II - Standardization of Reporting Requirements for Companies' Foreign Subsidiaries

REPORTING REQUIREMENTS	UNIFORM	DIFFERENT	N
Number of formal reports	84 86.6%	13 13.4%	97
Content of the formal reports	79 81.4%	18 18.6%	97
Format of the formal reports	72 74.2%	25 25.8%	97
Frequency of formal reports	86 89.6%	10 10.4%	96

NOTES: Absolute frequencies and adjusted relative frequencies in percentage are provided for each cell.

N represents the number of valid cases for each reporting requirement.

Table 11.III - Differences Between the Reporting Systems for Foreign Subsidiaries and for Domestic Divisions

	ABSOLUTE FREQ.	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ. FREQ. (PERCENT)
No difference (the same system is used)	38	39.6	39.6
Little difference (basically the same syst. with minor modifications)	53	55.2	94.8
Substantial difference (sys. differ in major aspects)	5	5.2	100.0
Not determined	1	MISSING	100.0
TOTAL	97	100.0	

N = 96

each line of business. In general, the approach taken by companies range from very rigid positions where content, number, frequency and format of the formal reports are exactly the same for all subsidiaries, to more flexible practices where there is an attempt to tailor reporting requirements to the particular needs of different local operations. To give a few examples of cases encountered in practice, in one company quarterly reports were requested from subsidiaries mainly for group consolidation purposes, whereas reports submitted monthly were used for monitoring and controlling subsidiaries' activities. While quarterly reports were standardized in terms of content and format, monthly reports were much influenced by subsidiaries' internal management accounts, their format being left to local management style. In another company, financial information included in the reporting system was standard while "technical", non-financial, information varied according to particular conditions. In a very flexible arrangement encountered in a company, the content and format of formal reports was left to the discretion of subsidiaries within the guidelines given by headquarters. Here, subsidiary managers were said to be "encouraged to express themselves as they see necessary in illustrating their position".

Another aspect explored in the study was the extent to which the reporting systems operating internally between foreign subsidiaries and headquarters differ from those operating between domestic divisions (or subsidiaries) and headquarters. Results are shown in Table 11.III. The majority of firms (55 percent, i.e. 53 companies) recognized that the reporting system applied for foreign subsidiaries and that used for domestic divisions were different only to a small extent: the reporting systems used for both foreign and domestic operations were basically the same, being differentiated in minor aspects only. Differences in these cases are generally restricted to variations in timing of certain reports, and in content of the reporting system insofar as reports on economic, political, legal and social conditions are only applied to foreign operations. In a large proportion of cases (40 percent of the total), there was no difference between the reporting requirements for foreign and domestic operations. In contrast, only a tiny minority of respondents (5 percent) admitted to make a substantial distinction in the reporting

requirements from different subsidiaries. In these cases there is reason to say that two different internal reporting systems exist, one for foreign subsidiaries, the other for domestic affiliates.

11.2.3. Discussion and Conclusions

The present section described the major characteristics of the internal reporting systems in operation in the MNCs studied. Reporting systems operated between foreign subsidiaries and headquarters were analysed in terms of content, reporting frequency of their components, and degree of standardization across operations of a same company.

The considerable variety and volume of information reported through institutionalized communication channels, illustrated in studies such as McInnes [1971], Watt, Hammer and Burge [1977], Persen and Van Lessig [1979], and Leksell [1981], was again suggested in this survey. Internal reporting systems were found to include a wide range of information of both financial and non-financial nature. However, the incidence and reporting frequency of financial items is by far higher. Balance sheets, profit and loss accounts, reports on borrowing in subsidiaries, cash-flow statements, and detailed segmental sales analysis were all found in nearly every company. Their reporting frequency is extremely high with the great majority of the cases requesting the items once a month or even more often. In contrast, non-financial reports such as production output, manufacturing capacity utilization, market share, labour relations, among others, are not included in every information system, and their reporting frequency tends to be lower, often only once or twice a year.

Among the non-financial items included in the internal systems of communication, formal reports on local environmental conditions are of particular relevance to the study. As discussed in chapter 4, Leksell [1981] drew attention to the fact that in some of the Swedish MNCs studied economic and political environmental information was regularly submitted by foreign subsidiaries to headquarters via the internal

reporting system. No comparable evidence is available for multinationals originated in the U.S., U.K. and elsewhere. The present study revealed that in British MNCs reports on both economic and non-economic conditions faced in host countries are included in the formal information systems of the great majority of corporations. Reports on environmental economic conditions are in a sizeable number of companies forwarded rather frequently (once every quarter, or even monthly). As to reports on political, legal and social conditions, although they can be found in most companies, in a large proportion of cases they are either submitted on an occasional or infrequent (once a year) basis. The general impression collected from interviews is that the request for environmental economic information normally precedes the introduction of formal reports on political, legal and social environmental conditions. This latter type of information is usually of a more specialized and sensitive nature than economic reports. The presence of environmental information in the formal communication channels of MNCs is perhaps an indication of the importance of the environment for the monitoring of subsidiaries operating overseas. This point will be explored in the next chapter.

As regards the standardization of the information systems, the study concluded that in most cases the reporting requirements do not change across the foreign subsidiaries of a same MNC. In effect, requirements such as number of formal reports requested from subsidiaries, content, format, and frequency of the reports were all considerably uniform across subsidiaries in the overwhelming majority of the companies studied. Similarly, international reporting between overseas operations and headquarters was found to be basically the same as domestic reporting between home operations and headquarters. These findings agree with those of Leksell [1981], adding evidence to the high degree of standardization of the formal reporting requirements in companies' internal information systems.

11.3. Findings on Internal Reporting Practices and Companies' Characteristics

The internal reporting systems that are in operation between foreign subsidiaries and companies' headquarters have just been described in terms of their content, reporting frequency, and standardization. The present section now attempts to explore relationships between characteristics of the reporting systems and companies' features, such as size, commitment to foreign operations, strategy, etc. Also relationships between internal reporting characteristics and other companies' practices are explored here. As in the previous chapter the analysis follows a sequence of major tests. Each of these is motivated by an hypothesis established a priori, which is statistically tested using a decision model that includes the formulation of a null hypothesis. This decision model was described in section 10.2. of the previous chapter.

Test 1

This test investigates the relationships between the magnitude of the flow of information reported in a company by foreign subsidiaries and major characteristics of the respective companies. It is hypothesized, following the discussion in chapter 7, that corporations with, for example, higher commitment to foreign operations, more international experience, and tighter control exercised by headquarters will request from their foreign subsidiaries a higher volume of information.

The null hypothesis states that:

H₀₁: there is no association between the magnitude of the flow of information reported in a company by each foreign subsidiary and:

- . the dominant industrial activity of the international operations of the company;

- . the size of the company;
- . the level of the company's commitment to foreign operations;
- . the level of the company's internationalization;
- . the international experience of the company;
- . the organizational structure of the company;
- . the level of the company's exposure to host country and government influence;
- . the degree of strategic control exercised in the company by headquarters over foreign subsidiaries; and
- . the strategy adopted by the company.

Magnitude of the flow of information reported by each subsidiary⁽¹⁾ in a company was defined according to the following equation:

$$TR = X_1 + X_2 + 2X_3 + 4X_4 + 12X_5 + 52X_6$$

where: TR is the total number of reports submitted in a company by each subsidiary during one year⁽²⁾;

X_1 is the number of reports submitted by each subsidiary "only occasionally"⁽³⁾;

X_2 is the number of reports submitted by each subsidiary "annually";

X_3 is the number of reports submitted by each subsidiary "half yearly";

X_4 is the number of reports submitted by each subsidiary "quarterly";

X_5 is the number of reports submitted by each subsidiary "monthly"; and

X_6 is the number of reports submitted by each subsidiary "weekly".

Variable TR measures, therefore, the number of formal reports that in a corporation are forwarded by each subsidiary to headquarters during a one year period. It reflects not only the reporting frequency of each item included in the internal reporting system operated in a company, but also the actual incidence of each item which is related to the content of the reporting system.

The tests of independence that were conducted between TR and the

variables measuring companies' characteristics, were based on two different statistical methods: Pearson product-moment correlation coefficient (r), and chi-square (χ^2).

The Pearson's r is a very powerful and efficient statistic when used as a measure of the strength of the relationship between two variables. Besides indicating the goodness of fit of a linear regression line to the data, the strength of relationship also indicates, when r is squared, the proportion of variance in one variable explained by the other [Lapin, 1978, sec.10-5]. As a parametric statistic the Pearson's r should only be applied to variables measured at an interval-level or higher. The variable TR just created complies with this requirement, since it is situated at the ratio-level of measurement. On the other hand, some variables used to measure companies' characteristics are also at the interval- or ratio-level (i.e. variables SIZSALE, SIZASSET, SALEOUT, ASSETOUT, NCOUNTRY, and NAREA). Tests of association between TR and such variables were conducted using Pearson correlation coefficient. Another condition necessary for the use of the Pearson's r is that the relationship between the variables be linear [Koutsoyiannis, 1973, pp.43-46]. As Downie and Starry [1977, p.193] suggest, a scatter diagram relating the two relevant variables helps in visualising the overall pattern of relationship and in checking for linearity. Scatter diagrams were, therefore, analysed before Pearson's correlation coefficients were applied.

Other variables used to measure companies' characteristics are at the nominal- or interval-level (i.e. INDUSTRY, FIRSTOUT, STRUCT, EXPOSURE, CONTROL and STRATEGY). For these, tests of association with TR were conducted using chi-square which is a method firstly used in section 10.3., where a detailed comment on the statistic can be found.

The variable TR created for purposes of this test, has a mean of 98.27 which indicates that in the companies surveyed subsidiaries submit to headquarters an average of 98 reports during one year. The standard deviation is 39.50 and the range is 181, with a minimum of 32 reports per year and a maximum of 213. Skewness and kurtosis of TR are respectively 0.547 and 0.083.

Table 11.IV presents the results of the tests of independence conducted between variable TR and the variables used to measure companies' characteristics. A statistically significant relationship was found between the magnitude of the internal flow of information reported by foreign subsidiaries and the level of companies' commitment to overseas activities. The direction of the relationship is direct (the value of r is positive), which means that the higher the commitment of a company to its foreign operations (measured in terms of the percentage of assets abroad to total assets), the higher in the company is likely to be the flow of information required by headquarters from subsidiaries (measured in terms of the number of reports submitted by each subsidiary per year). In spite of a high level of significance which tends to prove the existence of a relationship between the two variables in the population, the strength of such a relationship in the sample is modest, as revealed by an r of 0.272.

The other variable utilized to measure the level of a firm's commitment to foreign operations - which reflects the proportion of sales achieved in foreign markets to group consolidated sales revenue - produced a result above the cut-off level (Table 11.IV). Therefore, its relationship with TR cannot be considered statistically significant. Behind this finding could lie the fact that foreign assets are probably a better indicator of a firm's commitment to overseas operations than foreign sales. In the particular case under appreciation here, the existence of a high proportion of assets invested abroad most likely means that the facilities owned by a company outside the U.K. are involved in manufacturing and capable of responding to the demands of headquarters in terms of provision of information. In contrast, a high proportion of sales abroad, which may mean that a company is simply exporting from the U.K. a large percentage of its output, does not necessarily imply the existence overseas of complex operations. Foreign subsidiaries may have marketing responsibilities only, and in this case it is understandable that the flow of information requested by headquarters to subsidiaries is somewhat limited.

Table 11.IV - Tests of Independence Between the Magnitude of the Flow of Information Reported via the Internal System and Corporate Characteristics Using Pearson Product-Moment Correlation Coefficient and Chi-Square

VARIABLE NAME	INDUSTRY	Company Size		Commitment to Foreign Operations		Internationalization		International Experience	Organizational Structure	Exposure to Host Country Influence	Control by HQ	Corporate Strategy
		SIZSALE	SIZASSET	SALEOUT	ASSETOUT	NCOUNTRY	NAREA					
TR		0.136	0.063	0.170	0.272	-0.110	-0.056					
		(0.192)	(0.548)	(0.109)	(0.010)	(0.286)	(0.588)					
		97-3(a)	97-4(a)	90	88	96	97					
		5.23						3.41	6.58	1.89	2.78	0.84
		(0.265)						(0.491)	(0.160)	(0.755)	(0.596)	(0.658)
		4						4	4	4	4	2
		97						93	96	94	96	90

NOTES: ** significant $p \leq 0.01$ Significance levels for r are two-tailed probabilities.
 Key to acronyms and symbols: TR = Total number of reports submitted by each subsidiary in a company during one year.
 r = Pearson's product-moment correlation coefficient
 χ^2 = chi-square statistic
 p = level of significance
 d.f. = degrees of freedom
 N = number of valid cases

(a) Statistics were calculated excluding three outliers in variable SIZSALE and four outliers in variable SIZASSET. These outliers represent extremely large companies with size values falling very far from the range of values where all the other companies are situated.

Tests of independence between TR and the other explanatory variables included in the null hypothesis produced non-significant results (Table 11.IV). For this reason association between such variables cannot be accepted.

Summary: Test 1 explored the relationships between the magnitude of the flow of information reported by subsidiaries to headquarters via the internal reporting system and major company characteristics previously selected as the study's explanatory variables. The object of the test was to discover which main corporate features, if any, were associated with the variation across companies in the volume of information contained in the internal reporting systems. The results revealed a statistically significant association between the total number of reports submitted in a company by a foreign subsidiary during one year, and the company's degree of commitment to foreign operations (measured in terms of the percentage of assets located abroad to total company assets). This association was proved to be positive, showing that higher levels of commitment are associated to higher flows of information. Therefore, variations among companies in the volume of information reported internally from subsidiaries may be explained by the varying level of commitment to operating abroad, as measured by the relative amount of assets invested overseas.

Test 2

Reporting systems operated internally between foreign subsidiaries and headquarters include reports of both financial and non-financial nature. The relative weight of non-financial reports in the total reporting system may vary from company to company and be associated with certain corporate characteristics. In chapter 7 an hypothesis was formulated according to which the nature of the information reported in the internal information systems would be associated with the size, internationalization, experience, and organizational and managerial complexity of the MNCs. For purposes of the present test, information is classified in two groups of different nature, namely financial and non-financial. The test explores the relationships between the share of non-financial reports included in companies'

internal reporting systems and major features of these companies. It is anticipated that corporations with, for example, higher levels of commitment to foreign operations, a higher degree of internationalization, tighter strategic control exercised by headquarters over subsidiaries, and corporate strategies favouring a global integration of manufacturing activities, will request from their foreign subsidiaries a relatively higher volume of information of a non-financial nature (e.g. market shares, production output, product quality, reports on economic, political and legal conditions in host countries). On the other hand, companies with a low commitment to foreign activity, low internationalization, loose control exercised by headquarters, and segmented nation-for-nation strategies will tend to overlook non-financial information, and emphasize more traditional reports of a financial nature (e.g. balance sheets, profit and loss accounts, cash-flows).

The null hypothesis states that:

H02: there is no association between the relative weight of non-financial reports in a company's total reporting system, and:

- . the dominant industrial activity of the international operations of the company;
- . the size of the company;
- . the level of the company's commitment to foreign operations;
- . the level of the company's internationalization;
- . the international experience of the company;
- . the organizational structure of the company;
- . the level of the company's exposure to host country and government influence;
- . the degree of strategic control exercised in the company by HQ over foreign subsidiaries; and
- . the strategy adopted by the company.

Relative weight of the non-financial reports included in a company's internal reporting system is defined as the percentage of the number of non-financial reports submitted by a subsidiary during one year, relative to the total number of reports (financial and non-financial) submitted by the subsidiary during the same period. This percentage provides a measure of the magnitude of the flow of non-financial

information that is reported by subsidiaries compared to the total flow of information. Its computation was based on the following equations:

$$\text{PERCNFR} = \text{NFR} / \text{TR} \times 100$$

with

TR as calculated in Test 1 , and

$$\text{NFR} = Y_1 + Y_2 + 2Y_3 + 4Y_4 + 12Y_5 + 52Y_6$$

where: PERCNFR is the percentage of non-financial reports submitted in a company by each subsidiary during one year in relation to the total number of reports submitted in the same period(2);

TR is the total number of reports (both financial and non-financial) submitted by each subsidiary during one year;

NFR is the total number of non-financial reports submitted by each subsidiary during one year;

Y_1 is the number of non-financial reports submitted by each subsidiary "only occasionally"(3);

Y_2 is the number of non-financial reports submitted by each subsidiary "annually";

Y_3 is the number of non-financial reports submitted by each subsidiary "half yearly";

Y_4 is the number of non-financial reports submitted by each subsidiary "quarterly";

Y_5 is the number of non-financial reports submitted by each subsidiary "monthly"; and

Y_6 is the number of non-financial reports submitted by each subsidiary "weekly".

Tests of independence between PERCNFR and the variables used to measure companies' characteristics were conducted following an approach similar to that adopted in Test 1. Pearson product-moment correlation coefficient and chi-square were applied to the variables under analysis according to their respective level of measurement.

Variable PERCNFR is at the ratio-level of measurement. Its mean of 26.88 indicates that for the 97 companies participating in the study the number of non-financial reports submitted by each subsidiary during one year is on average around 27 percent of the total number of reports submitted by the subsidiaries during the same period. The standard deviation of PERCNFR is 14.42 and the range is 60, with a minimum of zero percent and a maximum of 60 percent of non-financial reports. Skewness and kurtosis are respectively 0.078 and -0.718.

The results of the tests of independence conducted between PERCNFR and the variables measuring companies' characteristics are presented in Table 11.V. Statistically significant relationships were found for the level of a company's commitment to foreign operations, and the degree of a company's internationalization.

The degree of a company's commitment to foreign operations can be measured either by the proportion of total assets located outside the U.K. to total company assets or by the proportion of sales achieved in foreign markets to group consolidated sales revenue. Both these variables are correlated with the relative weight of non-financial information relative to the total information reported in the internal systems. Because the correlation is positive in both cases, it may be concluded that the higher the commitment of a company to overseas activities (measured in terms of both sales and assets abroad), the higher in the company's internal reporting system is likely to be the percentage of non-financial reports in relation to the total number of reports. The strength of the association in the sample for these variables is fair (see Table 11.V).

Statistically significant relationships were also encountered for the level of internationalization of a company either measured by the total number of countries - U.K. excluded - where a company maintains control over industrial operations, and the number of different geographic areas in the world where a company maintains control over industrial operations. Here the correlation for both variables with PERCNFR was also found to be positive in direction, though the magnitude is smaller than the one encountered for the variables

Table 11.V - Tests of Independence Between the Weight of Non-Financial Information in Internal Reporting Systems and Corporate Characteristics Using Pearson Product-Moment Correlation Coefficient and Chi-Square

VARIABLE NAME	Type of Industry	Company Size		Commitment to Foreign Operations		Internationalization		Internal Experience	Organizational Structure	Exposure to Host Country Influence	Control by HQ	Corporate Strategy
		SZSALE	SIZASSET	SALEOUT	ASSETOUT	NCOUNTRY	NAREA					
PERCENFR	INDUSTRY	0.166	0.062	0.364	0.376	0.238	0.255	FIRSTOUT	STRUCT	EXPOSURE	CONTROL	STRATEGY
		(0.109)	(0.555)	(0.0004)	(0.0003)	(0.020)	(0.012)					
		97-3(a)	97-4(a)	90	88	96	97					
χ^2	0.71							0.79	2.48	4.12	2.77	1.67
	(0.950)							(0.941)	(0.649)	(0.390)	(0.598)	(0.435)
p	4							4	4	4	4	2
d.f.	94							90	93	91	93	87
N												

NOTES: ** significant $p \leq 0.01$ * significant $0.01 < p \leq 0.05$ Significance levels for r are two-tailed probabilities.
 Key to acronyms and symbols: PERCENFR = Percentage of non-financial reports in relation to the total number of reports submitted in a company by each foreign subsidiary during one year.

r^2 = Pearson's product-moment correlation coefficient
 χ^2 = chi-square statistic
 p = level of significance
 d.f. = degrees of freedom
 N = number of valid cases

(a) Statistics were calculated excluding three outliers in variable SIZASSET and four outliers in variable PERCENFR. These outliers represent extremely large companies with size values falling very far from the range of values where all the other companies are situated.

measuring commitment to foreign operations (Table 11.V). It can be concluded, therefore, that the higher the level of a company's internationalization (measured in terms of number of countries, and number of geographic areas operated by the company) the higher is likely to be the percentage of non-financial reports in relation to the total number of reports included in the company's internal reporting system.

Tests of independence between PERCNFR and the two other ratio-level variables which measure company size, have not produced statistically significant results. Neither have tests conducted between PERCNFR and the nominal and ordinal-level variables in Table 11.V.

Summary: Test 2 revealed that companies with more international involvement tend to request from their foreign subsidiaries a higher proportion of non-financial information out of the total volume of information required. In fact, corporations with higher levels of commitment to foreign operations (i.e. firms with large percentages of sales generated and assets located abroad), as well as corporations with higher degrees of internationalization (i.e. firms operating in a large number of countries spread over a number of different world geographic areas) are likely to include in their internal reporting systems a higher percentage of reports of a non-financial nature. In contrast, companies with low commitment to overseas operations and low levels of internationalization tend to request from their foreign subsidiaries a higher proportion of financial reports, not including in their reporting systems much of the non-financial information that is found in companies more involved internationally. It was seen earlier in chapter 5 that the use of non-financial information in decision making besides helping in promoting the long term view in companies, facilitates in a multinational context the consideration of the specificity of each subsidiary. The results of this test suggest that companies with higher levels of international involvement tend to show higher percentages of non-financial information in their reporting systems. It can be argued that such companies, which in principle are subject to higher levels of variation in the operating characteristics of their subsidiaries, are better equipped to take the specificity of each subsidiary into account in their decisions.

Test 3

Among the items generally included in the internal financial reporting systems operated between foreign subsidiaries and headquarters, there are two which are of special interest to this study: reports on economic conditions in host countries, and reports on political, legal and social conditions in host countries. The incidence and reporting frequency of such items have been described in the previous section on companies' practices. Test 3 aims at determining which corporate characteristics tend to be associated with higher reporting frequencies of the environmental reports. It is expected that corporations with, for example, high commitment to foreign operations, high exposure to host country and government influence, and strategies favouring a global integration of international industrial activities, will tend to request from foreign subsidiaries more frequent reports on the particular economic and non-economic conditions experienced by subsidiaries locally. On the other hand, it is expected that firms with low levels of commitment to foreign operations, little exposure to host country influence and segmented nation-for-nation strategies will tend not even to include in their internal reporting systems reports on local economic and non-economic conditions faced by foreign subsidiaries.

The null hypothesis states that:

- H03: (1) there is no association between the inclusion or non-inclusion, and the reporting frequency of reports on economic conditions in host countries in a company's internal reporting system, and :
- . the dominant industrial activity of the international operations of the company;
 - . the size of the company;
 - . the level of the company's commitment to foreign operations;
 - . the level of the company's internationalization;
 - . the international experience of the company;
 - . the organizational structure of the company;
 - . the level of the company's exposure to host country and government influence;

- . the degree of strategic control exercised in the company by headquarters over foreign subsidiaries; and
- . the strategy adopted by the company.

(2) there is no association between the inclusion or non-inclusion, and the reporting frequency of reports on political, legal and social conditions in host countries in a company's internal reporting system, and :

- . the dominant industrial activity of the international operations of the company;
- . the size of the company;
- . the level of the company's commitment to foreign operations;
- . the level of the company's internationalization;
- . the international experience of the company;
- . the organizational structure of the company;
- . the level of the company's exposure to host country and government influence;
- . the degree of strategic control exercised in the company by headquarters over foreign subsidiaries; and
- . the strategy adopted by the company.

The dependent variables measuring inclusion and reporting frequency of reports on environmental conditions (i.e. variables ECONC and PLSCONC) are at the ordinal-level of measurement, and as such they were subject to tests of independence, together with the explanatory variables, using the chi-square statistic.

Table 11.VI shows the results of these tests, emphasizing the relationships proved to be statistically significant. Reports on economic conditions in host countries were found to be significantly associated with the level of a company's commitment to foreign operations, as measured by the proportion of total assets located outside the U.K. to total company assets, and with the nature of a company's international industrial strategy.

Analysis of Table VI in Appendix D reveals that 69 percent of the companies that do not include reports on local economic conditions in their internal reporting systems have 25 percent or less of their assets located outside the U.K. In contrast, 77 percent of all corporations which request the submission of such reports from subsidiaries (either occasionally or on a regular basis) have more

Table 11.VI - Tests of Independence Between the Incidence and Reporting Frequency of Reports on Local Economic and Non-Economic Environmental Conditions and Corporate Characteristics Using Chi-Square

	Type of Industry	Company Size	Commitment to Foreign Operations	Internationalization	International Experience	Organizational Structure	Exposure to Host Country Influence	Control by HQ	Corporate Strategy			
VARIABLE NAME	INDUSTRY	SIZSALE	SIZASSET	SALEOUT	ASSETOUT	N COUNTRY	NAREA	FIRSTOUT	STRUCT	EXPOSURE	CONTROL	STRATEGY
VARIABLE NAME STAT.												
ECOND	5.56	5.13	5.21	5.72	11.55	7.33	7.16	4.70	4.57	3.65	7.08	10.90
p	(0.235)	(0.275)	(0.267)	(0.057)	(0.003)	(0.062)	(0.128)	(0.320)	(0.334)	(0.456)	(0.313)	(0.028)
d.f.	4	4	4	2	2	3	4	4	4	4	6	4
N	97	97	97	90	88	96	96	93	96	94	96	90
PLSCOND	3.77	3.63	16.67	11.32	13.48	17.71	20.88	2.79	9.12	13.64	10.73	10.56
p	(0.708)	(0.727)	(0.034)	(0.079)	(0.036)	(0.007)	(0.002)	(0.835)	(0.167)	(0.034)	(0.218)	(0.014)
d.f.	6	6	8	6	6	6	6	6	6	6	8	3
N	95	95	95	88	86	94	94	91	94	92	94	88

NOTES: ** significant $p < 0.01$ * significant $0.01 < p < 0.05$
Key to acronyms and symbols: ECOND - Reports on economic conditions in host countries, as an item included in the formal reporting system operated in a company between foreign subsidiaries and HQ.
 PLSCOND - Reports on political, legal, and social conditions in host countries, as an item included in the formal reporting system operated in a company between foreign subsidiaries and HQ.
 χ^2 = chi-square statistic
 p = level of significance
 d.f. = degrees of freedom
 N = number of valid cases

than 25 percent of their assets overseas. On the other hand, and as far as international strategy is concerned, Table VII in Appendix D reveals that 92 percent of the companies that do not include reports on economic conditions in their reporting systems follow a segmented nation-for-nation strategy in the organization of their international industrial operations. Among the MNCs with some form of global integration strategy, only 3 percent do not include reports on economic environmental conditions in their reporting systems. All the others do: 7 percent request such reports from subsidiaries only occasionally; 37 percent ask them once a year; and 53 percent request them once every six months or more frequently.

Reports on political, legal and social conditions in host countries were found to be associated with a large number of company characteristics. Table 11.VI shows a statistically significant relationship between the incidence and reporting frequency of such non-economic environmental reports and 1) the level of a company's internationalization, as measured by either the total number of countries, or the number of different geographic areas in the world where the company maintains control over industrial operations; 2) the strategy followed by a company in the organization of its international industrial activity; 3) the degree of a company's exposure to host country and government influence in its foreign operations; 4) the size of a company, as measured by the amount of total assets for the group; and 5) the degree of a company's commitment to foreign operations, as measured by the proportion of total assets located outside the U.K. to total company assets.

Level of internationalization is the company characteristic with the highest level of significance, and some of the strongest association with a Cramer's V higher than 0.30, and an uncertainty coefficient (asymmetric) slightly higher than 0.07, (see Tables VIII and IX in Appendix D) The absolute majority of corporations which do not include reports on local political, legal and social conditions in their reporting systems have a comparatively low level of internationalization, since they are established in less than five countries and in less than three different geographic areas. On the other hand, more than two thirds of the corporations which request

such reports from subsidiaries on a regular basis (annually or more often) have medium or high levels of internationalization (they operate in six or more countries, spread over four or more different geographic areas). As to corporate strategy, the cross tabulation in Table X of Appendix D, shows that 94 percent of the corporations which do not request from subsidiaries reports on political, legal and social conditions practice segmented nation-for-nation strategies. Among all companies with some form of global integration strategy only one does not include such reports in its internal reporting system. All the others do, either occasionally (20 percent) or regularly (77 percent). Level of company exposure to host country influence, level of commitment to foreign operations (measured in assets located overseas), and company size (measured in group consolidated assets), are all associated with the reporting of non-economic environmental conditions though in a more modest way. Tables XI to XIII in Appendix D present cross tabulations with these independent variables. Results show that companies which do not request from subsidiaries environmental information of political, legal and social nature tend to be those (the absolute majority) which experience low levels of exposure to host country influence (ratings of 1 in a scale of 1 to 5), have less than 25 percent of their total assets outside the U.K., and have total consolidated assets of less than £100 million. In contrast, companies with higher levels of exposure to local conditions, higher proportion of their assets located overseas, and larger in asset size tend not only to include reports on political, legal and social conditions in their internal reporting systems but also to request them more frequently from subsidiaries

Summary: Test 3 concentrates on two items generally included in firms' internal reporting systems, which are of special interest to the study. These items, both of non-financial nature, are namely reports on economic conditions in host countries, and reports on political, legal and social conditions in host countries. The incidence and reporting frequency of such reports were related to major company characteristics. Results of the tests of independence conducted showed a statistically significant relationship between the incidence and reporting frequency of reports on economic conditions and the commitment of companies to foreign operations, as well as the

strategies followed by companies in the organization of their international industrial activities. Statistically significant relationships were also found between the incidence and reporting frequency of reports on political, legal and social conditions and the companies' level of internationalization, the strategies followed by companies in their international industrial activities, the companies' commitment to foreign operations, the companies' level of exposure to host country influence, and the companies' asset size. All these relationships are positive. Therefore, the companies where reports on local economic conditions are more frequently requested by headquarters tend to be those with higher levels of commitment to foreign operations (i.e. large proportion of assets located abroad), and more sophisticated strategies, namely strategies involving forms of global integration of international industrial activities. Also, those companies where reports on political, legal and social conditions in host countries are more frequently requested by headquarters, tend to have high levels of internationalization (i.e. they operate in a large number of countries, spread over different world geographic areas), industrial activities organized on a supra-national global basis, high levels of exposure to host country and government influence, high commitment to foreign operations, and large asset size. Comparing the results obtained for reports on economic conditions and for reports on political, legal and social conditions, a larger number of company features were found to be associated with the latter than with the former. As seen in the previous section (section 11.2.), reports on environmental economic conditions are more common than reports on non-economic conditions, and usually their introduction in companies long precedes that of non-economic environmental reports. Items on local economic conditions are, therefore, likely to be found in a wide spectrum of corporations, whereas reports on political, legal and social conditions tend only to be found in a group of companies with very special characteristics, such as high exposure levels to local host country influences, or high levels of geographic diversification.

Test 4

This test attempts to discover whether internal reporting practices are associated with the way in which the environmental assessment activity is organized in companies' headquarters. The reporting practices considered here are those introduced in the three tests above. A description of the different ways in which the environmental assessment activity is organized was presented in the previous chapter (chapter 10). Three major groups were identified there: one includes those companies where foreign environmental information is processed as part of a formal institutionalized headquarters function, i.e. companies where there are one or more managers with formal responsibility for collecting and analysing foreign environmental information; the second group includes those corporations in whose headquarters foreign environmental information is collected and analysed but only on an informal basis; the third group of companies includes those where the collection and analysis of foreign environmental information is not regularly carried out in headquarters, either formally or informally.

At a first level of analysis, it is hypothesized that companies which have formally set up in headquarters the environmental assessment function will tend to request from foreign subsidiaries a greater volume of information (measured in terms of total number of reports submitted by each subsidiary). At a second level of analysis, the nature of the information requested by headquarters is taken into consideration, and is associated with the way in which the environmental assessment activity is organized. At this level, it is hypothesized that corporations with formal collection and analysis of foreign environmental information will tend to request from foreign subsidiaries a higher percentage of non-financial reports vis-a-vis the total number of reports. It is also hypothesized that these companies will tend to request more frequently from foreign subsidiaries reports on economic and non-economic (i.e. political, legal and social) conditions encountered in host countries. If these relationships are proved significant, they will indicate that the sophistication of the internal reporting system, particularly in terms

of the relative weight of non-financial information and the frequency of reporting of environmental conditions found in host countries, is related to an organizational issue consisting of the existence of an environmental assessment activity in headquarters.

The null hypothesis states that:

H₀₄: there is no association between:

- . the total number of reports submitted by each subsidiary in a company during one year;
 - . the percentage of non-financial reports in relation to the total number of reports submitted by each subsidiary in a company during one year;
 - . the incidence and frequency in a company's reporting system of reports on economic conditions in host countries;
 - . the incidence and frequency in a company's reporting system of reports on political, legal and social conditions in host countries;
- and the way in which the environmental assessment activity is organized in the company's headquarters.

The tests of independence conducted used the chi-square statistic, since for every pair of variables under analysis there is always at least one variable at the ordinal-level of measurement. Results of the tests are shown in Table 11.VII.

The first relationship explored was found not to be significant. The organization of the environmental assessment activity in companies' headquarters is, therefore, not significantly associated with the volume of information requested by companies from their foreign subsidiaries. The other relationships explored consider the nature of the information that is reported by subsidiaries. Statistically significant relationships were found between the organization of the environmental assessment activity in companies' headquarters and 1) the relative share of reports of a non-financial nature requested from subsidiaries; 2) the incidence and frequency of reports on local economic conditions requested from subsidiaries; and 3) the incidence and frequency of reports on local political, legal and social conditions requested from subsidiaries - see Table 11.VII.

Table 11.VII - Chi-Square Tests of Independence Between Selected Characteristics of the Internal Reporting Systems and the Way in Which the Environmental Assessment Activity is Organized in HQ

	Organization of the environmental assessment activity in HQ - ENFCN			
	χ^2	p	d.f.	N
Total number of reports submitted during one year -TR	4.42	(0.352)	4	95
Percentage of non-financial reports in relation to the total no.of reports submitted during one year - PERCNFR	10.78	(0.029) *	4	92
Incidence and frequency of reports on economic conditions in host countries - ECOND	20.96	(0.0003) **	4	95
Incidence and frequency of reports on political, legal, and social conditions in host countries - PLSCOND	12.84 (a)	(0.0003) **	1	93

NOTES: ** significant $p \leq 0.01$
 * significant $0.01 < p \leq 0.05$
 (a) Chi-square subject to Yate's correction for continuity.
Key to symbols: χ^2 = chi-square statistic
 p = level of significance
 d.f. = degrees of freedom
 N = number of valid cases

A contingent tabulation for the percentage of non-financial reports is presented in Table XIV in Appendix D. Companies with no environmental assessment activity in headquarters tend to have very low levels of non-financial information reported by subsidiaries. In fact, 61 percent of the companies where the collection and analysis of foreign environmental information is not carried out, either formally or informally, include in their internal reporting systems less than 20 percent of information of a non-financial nature. In contrast, companies which have implemented in headquarters formal functions of environmental collection and analysis, tend to present in their internal reporting systems higher proportions of non-financial reports. In 88 percent of the companies in these conditions, more than 20 percent of the information that is requested from subsidiaries is non-financial.

As regards the incidence and frequency of reports on environmental economic conditions, an analysis of the respective frequency tabulation (Table XV in Appendix D) reveals that companies with formal collection and analysis of environmental information tend to request reports on economic conditions from foreign subsidiaries more frequently than the other companies. The absolute majority of the firms with institutionalized environmental assessment activity (59 percent), have such reports forwarded by subsidiaries at least once every six months. On the other hand, corporations where environmental information is not usually collected or analysed, not even informally, tend either not to include reports on economic conditions in their internal reporting systems (42 percent of cases), or to include them very infrequently (47 percent of the cases have environmental economic reports sent by subsidiaries only occasionally, or annually).

Finally, as to the incidence and frequency of reports on local political, legal and social conditions, the respective contingent tabulation had to be narrowed down to one degree of freedom because any other way of arranging the data produces an unacceptable number of expected cell frequencies smaller than 5. In 2x2 tables with N higher than 40, the constraint of having expected cell frequencies higher than 5 can be released, provided that the chi-square statistic is corrected for continuity [Siegel, 1956, pp.109-110, and p.64]. Such

correction for continuity, which was first suggested by Yates [1934], has been applied here to the computation of chi-square [Nie et al., 1975, p.243]. The tabulation of the joint frequency distributions (Table XVI in Appendix D), reveals that companies with some form of collection and analysis of foreign environmental information (formal or informal) tend to include in their internal reporting systems reports on political, legal and social conditions in host countries. Companies in whose headquarters environmental information is not processed tend, on the contrary, not to include such reports in their internal systems. It can be noted in the cross tabulation under analysis that among all companies which request from foreign subsidiaries information on local political, legal and social conditions, the overwhelming majority (88 percent) collect and analyse in headquarters information on foreign environments, whereas only 12 percent do not have any environmental assessment activity.

Summary: Test 4 explores the relationship between some important internal reporting practices and the way in which environmental assessment activities are organized in companies' headquarters. Results of the tests conducted failed to demonstrate that companies where the environmental assessment function had been formally set up, tend to request from their foreign subsidiaries a significantly higher volume of information. What the test shows, however, is that although the magnitude of the total flow of information reported by subsidiaries does not vary across companies in line with different forms of environmental assessment activities, the nature of the information that is requested from subsidiaries does, in a very significant way. In effect, companies with formal environmental assessment functions, and to a lesser extent, companies where environmental information is processed on an informal basis, were found to be much more selective in the type of information requested from subsidiaries abroad. It was demonstrated that such corporations tend to include in their internal reporting systems a significantly higher proportion of reports of a non-financial nature. They also tend to request from foreign subsidiaries significantly more frequent reports on economic conditions encountered in host countries, as well as reports on political, legal and social conditions. In contrast, companies in whose headquarters information on foreign environments is

not processed, either formally or informally, tend not only to include very little non-financial information in their internal reporting systems, but also not to request from foreign subsidiaries reports on the economic , political, legal and social environmental conditions faced locally. This suggests that MNCs in whose headquarters an environmental assessment activity can be found, tend to request through the internal reporting system a higher proportion of information that in principle is more capable of reflecting the particular environmental conditions experienced by subsidiaries.

11.4. Summary and Conclusions

This chapter characterized the channels of communication formally set up between foreign subsidiaries and headquarters in a MNC, which are used as a support of the internal decision making process. As discussed in chapter 4, the information supplied by such communication channels plays a vital role in the formal process of subsidiary performance evaluation and control.

The nature of the information reported through the formal communication channels may be described both in terms of the incidence and reporting frequency of the items that constitute the internal reporting system. Reports of a financial nature such as balance sheets, profit and loss accounts, borrowings in subsidiaries from local sources, cash flow statements, and segmental sales analyses were found in nearly every company studied. These items tend to be submitted by subsidiaries rather frequently, in many cases every month. On the other hand, non-financial reports such as market shares, production output, physical inventories, manufacturing capacity utilization, labour relations, and environmental reports, although widespread, were generally found in a smaller percentage of companies. This reporting frequency is also lower than that of financial items, and only in selected companies are non-financial reports regularly submitted by subsidiaries on a frequent (e.g. quarterly, or monthly)

basis.

Incidence and reporting frequency of items in the formal communication channels may be combined in a measure of the magnitude of the reporting. The volume of information flowing from subsidiaries to headquarters varies greatly from MNC to MNC. A test conducted in the chapter (Test 1) attempted to determine which company characteristics are associated with higher volumes of internal reporting. Results showed that corporations with higher levels of commitment to foreign operations, i.e. firms with a higher proportion of assets located abroad, tend to request over the year more information from each subsidiary.

Taking a step further the attempt to explain the differences encountered in the reporting practices of companies, another test (Test 2) explored the profile of those MNCs in whose internal reporting systems the weight of non-financial information is comparatively higher. In general, companies with more international involvement request from subsidiaries a higher proportion of non-financial information. In fact, results revealed that corporations with a higher commitment to foreign operations (this measured by both foreign sales and foreign assets), and companies with a greater internationalization level (measured by the number of countries and world geographic areas operated) tend to include in their reporting systems a higher percentage of non-financial reports. The nature of non-financial information is such that the consideration of the operational specificity of each subsidiary in decision making is facilitated when this type of information is used (see chapter 5). Therefore, the results of the test suggest that those companies with higher levels of international involvement, and particularly with a larger number of overseas subsidiaries, are in principle more able to consider the individuality of each subsidiary when using information reported via the formal channels.

An important aspect to be taken into account when considering the specificity of a subsidiary is the environmental influences to which the subsidiary is subject in the host country where it operates. The study found that in most companies, reports on the local environmental

conditions were normally included in the information reported through the internal system. Such reports are of different nature, and cover economic, political, legal and social issues. Despite the very high incidence of all kinds of environmental reports in companies' communication systems, the reporting frequency of economic information is much higher than that of political, legal and social information. In this latter case, only a relatively small minority of companies have non-economic environmental reports forwarded with frequency. As explained in the chapter, there is reason to believe that reports on political, legal and social conditions in host countries are normally introduced in companies' systems at a later stage, and only after economic environmental information being routinely submitted. These results concerning the incidence and frequency of environmental reports may be compared with the pioneering study of Leksell [1981], suggesting that in many British MNCs, as in Swedish multinationals, the formal reporting of host country environmental information is already a well established practice.

Variations in the incidence and frequency of environmental reports across companies were explored in the study in order to ascertain which major corporate characteristics are normally associated with environmental reporting. A statistical test conducted (test 3), revealed that companies with higher levels of commitment to foreign operations (i.e. longer proportion of assets abroad), and some form of global integration of their international industrial activities tend to have reports on local economic conditions more frequently submitted by subsidiaries. As regards the incidence and reporting frequency of political, legal and social environmental information a larger number of significant corporate characteristics was encountered. Reporting systems where non-economic environmental information is frequently reported by subsidiaries tend to be also operated in companies with high levels of commitment to foreign activities, and global strategies. Besides these characteristics, also the degree of a company's internationalization (measured by the number of countries and geographic areas operated), level of exposure to host country influence, and asset size were found to be associated with higher levels of reporting of non-economic environmental information. Considering that reports on political, legal and social conditions

are of a very specialized nature and are only frequent in a handful of companies, it is worth noting that it is in those multinationals which are particularly sensitive to the environment (i.e. companies with wide international involvement, global integration strategies, and high exposure to local political imperatives) that such reports are requested more frequently. This fact points to a certain adequacy of the information systems in operation as far as the level of environmental consideration is concerned. Such an adequacy will be further explored in the next chapter in the context of the performance evaluation and control of foreign subsidiaries.

Internal reporting practices were also explored in face of a particular organizational issue, which is of special relevance to the study. Such an issue was the object of the previous chapter and regards the way in which the environmental assessment activity is organized in the MNCs' headquarters. The results from Test 4 were not able to demonstrate that the magnitude of reporting is associated with the existence of a formalized environmental function. However, the test showed that the nature of the information reported is significantly associated with the organization of the environmental assessment function. In effect, companies where the environmental assessment function had been formally set up, and to a lesser extent, companies where environmental information was processed on an informal basis, were found to include in their internal reporting systems a higher proportion of non-financial information. Also, these companies were found to request more frequently from foreign subsidiaries reports on local economic and non-economic environmental conditions. These findings show that the way in which the environmental assessment activity is organized in companies, although probably not affecting the quantity of information formally reported by subsidiaries, has a marked influence on the quality of that information. Besides, the findings suggest that companies for which the assessment of the foreign environments is important enough to justify the creation of a formal function in headquarters, are those that request from subsidiaries the kind of information that in principle is more susceptible of reflecting local environmental conditions.

The characterization of the internal reporting system of a company would not be complete without the ascertainment of its degree of standardization. The study results are similar to the findings of Leksell [1981], insofar as the formal reporting requirements were generally found to be highly standardized across the subsidiaries of a same company. The great majority of firms consider to apply the same reporting requirements, namely number, content, format and frequency of reports to all overseas subsidiaries. In those cases where requirements differ, the changes appear to be primarily due to the size of operations, and the nature of the subsidiaries' activity. Also, internal reporting systems operating between foreign subsidiaries and headquarters were in most cases similar to the systems operating between domestic divisions (or subsidiaries) and headquarters. For both situations, reporting systems were basically the same, being normally differentiated in only minor aspects. The information collected here on the level of system standardization is only tentative. However, it seems that differences among subsidiaries of a same MNC do not generally find a correspondence on the different type of information formally requested from the subsidiaries.

Footnotes:

- (1) In the questionnaire instructions for participation, respondents were asked to answer questions having in mind the typical case in their companies whenever different practices were used for
- (2) Reports for which questionnaire respondents ticked "other periods" - please specify" as the appropriate reporting frequency, were recoded before computing this variable. Recoding of each item was done into the time interval immediately below the period specified by the respondent. For example, items said to be reported three times per year (a period not contemplated in the questionnaire), were recoded as if they were reported every six months.
- (3) For purposes of this test it was established that reports which are submitted to headquarters on an occasional basis - i.e. reports for which questionnaire respondents ticked "only occasionally" - have a reporting frequency of one per year.

CHAPTER 12 - THE USE OF INFORMATION PROVIDED BY INTERNAL REPORTING SYSTEMS FOR FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL

12.1. Introduction

Having described the characteristics of the formal channels of communication used to report information between foreign subsidiaries and headquarters, the study now turns attention to the way in which such information is employed in subsidiary performance evaluation and control. The present chapter analyses the formal criteria used by companies' headquarters in the evaluation and short term control of foreign subsidiaries' operating performance. Information forwarded by subsidiaries via the internal reporting system is regarded in the chapter as the major data input for the performance evaluation and control process.

This chapter addresses basically the issue of performance evaluation of subsidiary operations. In addition, it explores marginally the criteria used in the evaluation of subsidiary managers, and attempts to draw a parallel between the practices followed by companies in the two situations.

The chapter is organized into three major sections. The first, reports on companies' practices on the basis of data collected in the questionnaire and information gathered in follow-up interviews. This section will reveal which measures are perceived to be the most important and useful in monitoring foreign operations, which standards are normally used and how they are determined, and how uniform are performance evaluation criteria across a company's foreign operations. The section will also describe the criteria on which the assessment and performance of foreign subsidiary managers is based. and how such criteria differ from those used in the assessment of operations.

The second major section in the chapter will investigate the nature of major environmental influences on companies' subsidiaries operating abroad. It will attempt to identify for each geographic area in the world those environmental factors which are perceived in headquarters to have the greatest impact on subsidiaries' local activities. In addition, it will also explore the opinion of headquarters executives as regards the effectiveness of formal evaluation criteria in taking account of environmental factors, and how this compares with the executives' opinion as regards the desirability of such criteria taking the environment into account.

In the third major section of the chapter, statistical tests will be conducted in order to explore relationships between performance evaluation practices and companies' characteristics. Tests to investigate association of certain important practices will also be conducted in that section. The tests are directly motivated by the main hypotheses presented earlier in chapter 7 and will attempt to shed light into many of the questions raised previously in the study.

12.2. Report on Companies' Practices

12.2.1. Indicators of Performance Used for Foreign Subsidiaries

As it was discussed in chapter 4, one of the major uses in headquarters for the information reported by subsidiaries through the internal reporting system is the monitoring of subsidiaries' operating performance. In the previous chapter, the content and frequency of the reporting systems that are operated internally in companies were described without reference to the possible uses for such information (see, for example, Table 11.I). Here, the use of the information included in the reporting systems is related to the performance evaluation and control process.

In order to find out which items of information included in the internal reporting system are considered more useful in controlling and evaluating foreign subsidiaries' operating performance, respondents were asked to note the relative usefulness of the criteria available to them. Results are reported in Table 12.I. In general, financial items of information appear to be considered more useful than non-financial items. The report with the highest rating is the profit and loss account. Nearly 97 percent of the companies (i.e. 92 cases) rated this item 4 or 5 in a scale of usefulness ranging from 1 (not useful) to 5 (very useful). The median rating obtained for this item is as high as 4.9 (Table 12.I). Next in rating to the subsidiary profit and loss accounts are statements of cash flow generated in subsidiaries, and up-dates of the year-end profit forecasts. More than 90 percent of the companies rated both these items 4 or 5. Balance sheets, statements of borrowings in subsidiaries from local sources, up-dates of the budgeted year-end balance sheet and statements of sales per product or business, all received high ratings from respondents, with at least 60 percent of the cases considering these items more than moderately useful.

Amongst items generally included in the internal reporting systems of a non-financial nature, inventory levels (in quantity) were attributed the highest rating (median of 3.8), with 60 percent of respondents (i.e. 39 companies) assigning a rate of 4 or 5 - Table 12.I. Production output, market share in host country, reports on product quality, reports on local economic conditions, manufacturing capacity utilization, and reports on labour relations all follow suit with very similar ratings. Reports on political, legal, and social conditions faced in host countries are the only item of information whose median rating was below the "moderately useful" mid-point rate (median of 2.8). More than a third of the companies that include this item in their internal reporting system regard it of very little usefulness in the evaluation and control of subsidiaries' performance. Forty-one percent of the companies regard reports on local non-economic environmental conditions as moderately useful, and slightly less than a quarter of all respondents consider such reports rather useful (ratings of 4 or 5 in scale). According to findings described in section 11.2 of the previous chapter, the incidence of reports on

Table 12.I - Usefulness of Items Included in Companies' Internal Reporting Systems in Controlling and Evaluating Foreign Subsidiaries' Operating Performance

		R A T I N G					S T A T I S T I C S	
		1 Not useful	2	3 Moderately useful	4	5 Very useful	N	Median
F I N A N C I A L	Balance sheet	1	5	14	23	51	94	4.58
		21.3%			78.7%			
	Up-date of the budgeted year-end balance sheet	2	9	19	18	36	84	4.17
		35.7%			64.3%			
	Profit and loss account	0	1	2	17	75	95	4.87
		3.2%			96.8%			
	Up-date of the year-end profit forecasts	1	2	6	19	64	92	4.78
F I N A N C I A L		9.8%			90.2%			
	Cash flow generated in the subsidiary	0	0	8	14	72	94	4.85
		8.5%			91.5%			
	Sales per product or business	3	7	23	23	30	86	3.94
		38.4%			61.6%			
	Borrowings in the subsidiary from local sources	3	5	18	29	40	95	4.24
		27.4%			72.6%			
N O N - F I N A N C I A L	Inventory levels (in quantity)	5	6	15	22	17	65	3.80
		40.0%			60.0%			
	Market share in host country	6	13	16	14	11	60	3.19
		58.4%			41.6%			
	Production output	4	13	20	18	13	68	3.35
		54.4%			45.6%			
	Manufacturing capacity utilization	5	12	26	13	7	63	3.06
N O N - F I N A N C I A L		68.3%			31.7%			
	Labour relations	4	13	20	9	6	52	2.95
		71.2%			28.8%			
	Product quality	5	9	19	9	10	52	3.13
		63.5%			36.5%			
N O N - F I N A N C I A L	Report on economic conditions in host country	2	15	34	19	6	76	3.12
		67.1%			32.9%			
	Report on political, legal, and social conditions in host country	6	20	29	10	6	71	2.83
N O N - F I N A N C I A L		77.4%			22.6%			
	Others - Capital expenditure, credit policy, no. of employees, orders received, etc.	0	1	1	6	5	13	-

NOTES: - Absolute frequencies are provided for each rating in the 1 to 5 scale.
 - Adjusted relative frequencies (percentages) are provided in cumulative form for rates 1-3 and 4-5.
 N represents the total number of cases which rated the item.

non-economic conditions in companies' internal reporting systems was found to be surprisingly high. In effect, such reports were encountered in 80 percent of the total number of companies which responded to the questionnaire (see Table 11.I), although only slightly more than a half of the companies (55 percent of the total) have these reports submitted by subsidiaries on a regular basis (once every year, or more often). It is of interest to determine whether the companies that rated low the usefulness of reports on local political, legal, and social conditions, are simultaneously those that have the item in their reporting system submitted on an occasional, non-regular basis. If this is so, the usefulness of non-economic environmental information for those MNCs which require the item to be reported regularly will be substantially higher. The ascertainment of such a relationship requires a statistical test that will be conducted in section 12.4. of the present chapter.

Control and evaluation of foreign subsidiaries' operating performance is usually achieved with the assistance of a few indicators, which are normally calculated from raw-data submitted in the internal reporting system. In chapter 5 of the literature review, the most common success indicators were discussed and their main advantage and drawbacks examined.

Table 12.II lists the most common profit-based financial indicators used by companies in the regular monitoring of foreign subsidiaries' operations. The performance indicator most widely used is total income, either taken in isolation or compared with budget: more than 95 percent of the total number of respondents said that the amount of profit or loss for the period reported by subsidiaries is monitored as a means of assessing how subsidiaries have performed during the period. The use of ROI is also widespread: 89 percent of the companies (i.e. 85 cases) employ this ratio regularly, and 78 percent said they use ROI compared to budget. The investment base for the computation of ROI varies extensively, and may take the form of total amount of assets, net controllable assets, average trading assets, etc. Some companies mentioned the use of ROI as the basis of a detailed model of financial profile analysis. Return on sales is also a popular indicator of performance, used by more than three quarters of all

Table 12.II - Use of Profit-Based Measures in the Evaluation and Control of Foreign Subsidiaries' Operating Performance

	USE	DO NOT USE	N
Return on investment	85 88.5%	11 11.5%	96
Return on equity	30 31.2%	66 68.8%	96
Return on sales	74 77.1%	22 22.9%	96
Residual income	48 50.5%	47 49.5%	95
Total income	93 96.9%	3 3.1%	96
Budget compared to actual ROI	72 78.3%	20 21.7%	92
Budget compared to actual total income	90 94.7%	5 5.3%	95
Other profit measures	19 19.8%	77 80.2%	96

NOTES: Absolute frequencies and adjusted relative frequencies in percentage are provided for each cell.
N represents the number of valid cases.

companies. Measures that are not so widely used include RI employed by only half of the respondents, and return on equity, used by less than one third of the respondents. In the category "others" a number of indicators were mentioned, among which are gross margins, and ratios of interest coverage.

Besides the use of profit-based indicators, companies may also employ non-profit-based financial indicators. The great majority of firms (84 percent, i.e. 81 cases) regularly employ non-profit-based measures of a financial nature in the monitoring of subsidiaries' operations. Table 12.III lists the indicators most frequently mentioned by companies. This table is constructed from an open question where respondents were asked to list major measures used in headquarters. Therefore, the adjusted relative frequencies provided in the table represent the percentage of firms which specifically mentioned the use of a certain performance indicator, and not, as in the case of Table 12.II, the total percentage of firms that use the indicator. For this reason, frequencies in Table 12.II and 12.III are not comparable. The non-profit financial indicator most frequently mentioned by companies is cash-flow: 74 corporations indicated that this measure is regularly used to control and assess the operating performance of foreign subsidiaries. Other indicators often mentioned include orders, sales ratios, remittances, stock ratios, costs, debtors, working capital, and gearing, - see Table 12.III. A great number of other non-profit financial measures were indicated, among which are value added, overhead control ratios, capital expenditure, exchange exposure (via balancing of foreign assets/liabilities), key operating ratios, material risk (defined as stocks less purchase commitments less sales orders). All these measures had frequencies of less than 5.

Table 12.IV shows how each performance measure discussed above compares in importance with the others. Questionnaire respondents were asked to list by order of importance the financial measures (both Profit- and non-profit-based) which in their opinion provide better indicators of subsidiary operating performance. Table 12.IV presents the number of times (and respective relative frequencies) each financial measure was ranked 1st or 2nd, 3rd or 4th, and 5th or above. Given that the medians were calculated on the basis of the ranks

Table 12.III - Use of Non-Profit-Based Financial Measures in the Evaluation and Control of Foreign Subsidiaries' Operating Performance

	USE	DO NOT USE	N
<u>Non-Profit-Based Financial Measures</u>	81 83.5%	16 16.5%	97
Cash-flow	74 26.3%		
Orders	31 32.0%		
Sales ratios	23 23.7%		
Remittances	19 19.6%		
Stock ratios	17 12.5%		
Costs	14 14.4%		
Debtors	12 12.4%		
Working capital	11 11.3%		
Gearing	8 8.2%		
Other non-profit financial measures: overhead control ratios, value added, borrowings, capital expenditure, exchange exposure, etc.	37 38.1%		

NOTES: The table presents absolute frequencies and adjusted relative frequencies in percentage. Percentages are referred to an N (total number of cases) of 97.

Table 12.IV - Relative Importance Attributed to Financial Measures as Indicators of Foreign Subsidiaries' Operating Performance

		R A N K I N G O F I M P O R T A N C E				
		1st-2nd	3rd-4th	5th +	Statistics	
					N	Median
P R O F I T - B A S E D M E A S U R E S	Return on Investment	46 66.7%	17 24.6%	6 8.7%	69	1.49
	Return on Equity	7 43.7%	5 31.3%	4 25.0%	16	3.00
	Return on Sales	16 40.0%	16 40.0%	8 20.0%	40	3.00
	Residual Income	9 34.6%	9 34.6%	8 30.8%	26	3.30
	Total Income	30 53.5%	21 37.5%	5 9.0%	56	2.33
	Budget compared to actual ROI	10 40.0%	7 28.0%	8 32.0%	25	3.60
	Budget compared to actual total income	15 48.4%	10 32.2%	6 19.4%	31	2.63
N O N - P R O F I T - B A S E D M E A S U R E S	Other Profit Measures	7 63.6%	3 27.3%	1 9.1%	11	1.75
	Cash-flow	24 41.4%	24 41.4%	10 17.2%	58	2.89
	Orders	3 23.1%	6 46.1%	4 30.8%	13	3.20
	Sales Ratios	4 30.8%	5 38.4%	4 30.8%	13	3.67
	Remittances	1 9.1%	2 18.2%	8 72.7%	11	5.00
	Stock ratios	1 9.1%	3 27.3%	7 63.6%	11	4.63
	Costs	2 40.0%	1 20.0%	2 40.0%	5	4.00
	Debtors	1 16.7%	2 33.3%	3 50.0%	6	3.50
	Working Capital	1 20.0%	2 40.0%	2 40.0%	5	3.25
	Gearing	0	2	4	6	7.00
	Other non-profit measures	- 4 16.7%	33.3% 15 62.5%	66.7% 5 20.8%	24	3.63

NOTES: .Absolute frequencies and adjusted relative frequencies in percentage are provided for each cell.

.N represents the number of valid cases.

.Note that in this table the lower is the median, the higher is the importance attributed to the respective measure.

assigned to each measure (i.e. 1st, 2nd, 3rd, etc.). the lower the median the higher is the importance attributed to the respective performance indicator. The table reveals that more than half of the companies that ranked ROI and total income considered these measures either the most important financial indicator used, or the second most important. Other profit-based measures that were highly ranked are return on equity and return on sales. Total income compared to budget is regarded as considerably more important than ROI compared to budget. Among the reduced number of companies which ranked RI among the better indicators of performance, only slightly more than one third ranked the measure as 1st or 2nd. In what concerns the non-profit based financial measures, cash flow is the indicator most highly ranked by respondents, being considered the best or the second best indicator by 41 percent of the companies that ranked the item. Orders, and working capital were also ranked reasonably high. In contrast, gearing, remittances and stock ratios tended to be given a very low priority - Table 12.IV.

So far, the present section has dealt with formal information used in companies' headquarters in the evaluation and control of foreign subsidiaries' operating performance. Subsidiaries' operations are generally controlled through the monitoring of information reported via the internal reporting system. Such system provides a package of information on local operations that managers in headquarters analyse in greater or lesser detail. On the other hand, subsidiaries' operations may also be controlled with the assistance of a battery of performance indicators, calculated on the basis of some information submitted in the reporting system.

Table 12.V illustrates the results of a question which attempted to find out how important to the continuing process of performance evaluation is each of these two major instruments of assessment. The monitoring of the information submitted in the internal reporting system, taken as a whole, is considered more important for the evaluation and control of subsidiary operating performance than the strict monitoring of a battery of individual financial (profit- or non-profit-based) measures. The internal reporting system taken as a global package of information was considered very important (rated 5

in a scale of 1 to 5) by the absolute majority of respondents (60 percent, i.e. 56 companies); only 10 percent of all companies considered such an assessment instrument low to moderately important. In contrast, a battery of performance measures used independently of other information reported in the internal reporting system, was regarded as very important (rated 5) by 44 percent of the total (i.e. 39 corporations); as much as nearly one third of all respondents said that such measures were only low to moderately important when used without taking into account other information reported in the internal system. The difference in importance attributed by respondents to the two major assessment instruments is significant in statistical terms. Table 12.V reports the results obtained with the Wilcoxon matched-pairs signed-ranks test. As seen before, this is a test of differences for two related samples, appropriate for variables measured at the ordinal-level. The level of significance obtained for the test is very high: 0.001, i.e. 0.1 percent.

12.2.2. The Setting of Standards of Performance

When monitoring subsidiaries' operations, managers in headquarters usually compare the actual results achieved by subsidiaries against some yardstick or standard (see chapter 4 of the present study). Table 12.VI lists the performance standards most frequently used in practice, and the respective importance attributed by managers to each. There are two standards of performance which are employed by nearly every company (96 percent, i.e. 90 firms): targets previously set for subsidiaries, and the past actual results of subsidiaries (i.e. standards based on trends obtained from historical data). Performance targets were, by far, the standard most highly rated by companies. In a scale of importance ranging from 1 to 5, 87 percent of all respondents which use targets rated this standard as important or very important (i.e. rates of 4 or 5). The median of 4.7 reflects this extremely high rating. Past subsidiary results, although almost universally used, were considered important or very important by slightly less than half of the respondents (46 percent). Its median amounts to 3.4. All the other performance standards listed in Table

Table 12.V - Relative Importance of the Internal Reporting System and of Performance Measures in the Evaluation and Control of Foreign Subsidiaries' Operating Performance

INSTRUMENTS USED IN THE FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL	R A T I N G					STATISTICS	WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST			
	1 V.low	2	3 Moderate	4	5 V.high		N	Median	Cases	Z
The internal financial reporting system used as a global package of information on subsidiaries' operations	0	0	9	29	56	94	4.66	87	-3.219	(0.001) ***
	9.6%			30.8%	59.6%					
Performance measures of a financial nature, used independently of the internal reporting system	1	4	22	23	39	89	4.26			
	30.3%			25.9%	43.8%					

** significant $p \leq 0.01$ (i.e. 1%)

Table 12.VI - Standards Used to Evaluate Foreign Subsidiaries' Operating Performance. Listed By Order of Importance

	USE	DO NOT USE	N	R A T I N G					S T A T I S T I C S	
				1 Not Important	2 Moderately Important	3 Very Important	4	5	N	Median
A specific performance target previously set for the subsidiary	90 95.7%	4 4.3%	94	3	0	8	21	54 87.2%	86	4.70
The past actual results of the subsidiary (e.g. trends based on historical data)	90 95.7%	4 4.3%	94	1	10	36	27	13 46.0%	87	3.40
The results of other similar subsidiaries of the company. operating in the same host country	40 45.4%	48 54.6%	88	5	8	18	6	3 22.5%	40	2.89
The results of other similar subsidiaries of the company. operating in different host countries	69 73.4%	25 26.6%	94	12	20	22	12	1 19.4%	67	2.57
The results of other similar subsidiaries of the company. operating in the U.K.	72 75.8%	23 24.2%	95	18	21	16	12	3 21.4%	70	2.31
The results of similar firms in the host country where the subsidiary operates	60 63.2%	35 36.8%	95	17	21	14	5	2 11.9%	59	2.10

12.VI are used by a considerably smaller number of companies; median ratings of importance for such standards are all less than 3 (i.e. less than moderately important).

The preparation and approval of performance targets set for subsidiaries may be more or less centralized in headquarters. Earlier in chapter 4, it was suggested that the principle of authority and controllability would tend, under normal circumstances, to be more safeguarded when subsidiary managers have an active participation in the setting of targets. In effect, it is assumed that headquarters executives of a MNC have, normally, a lesser understanding of the operating conditions specific to each subsidiary than the managers locally responsible for the operations. Table 12.VII shows the degree of intervention of companies' headquarters in the preparation and approval of foreign subsidiaries' targets. Total independence of subsidiaries from headquarters in the setting of performance targets was found in only one company. In this firm, subsidiary managers simply select and set their own targets without consulting headquarters. In 41 corporations (45 percent), the level of subsidiary independence is still high, since headquarters executives usually accept the targets selected by subsidiaries which are submitted to them for approval. In 39 cases (43 percent), performance targets are only set after headquarters and subsidiary managers have collectively assessed alternatives and reached consensus. In 10 companies (11 percent), the process of selecting and assigning performance targets to subsidiaries is rather centralized. Here, headquarters managers select the targets and submit them to the subsidiary managers for ideas and suggestions. Headquarters then make the decision. Overall, in 89 percent of the cases subsidiary managers have a fair degree of participation in the setting of their units' targets. This suggests that certain conditions exist in most cases for the operating specificity of each subsidiary to be reasonably reflected in the performance targets.

The way in which performance targets are determined was found to be fundamentally linked to the budget. In fact, 89 percent of the companies (i.e. 83 firms) which use targets as performance standards, calculate them either on the basis of the subsidiary budget alone (75

Table 12.VII - Headquarters Intervention in the Preparation and Approval of Foreign Subsidiaries' Targets

	ABSOLUTE FREQ.	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Subsidiary managers select and set their own performance targets without consulting HQ	1	1.1	1.1
Subsidiary managers select the perform. target and submit it to HQ for approval; HQ usually accepts proposed targets	41	45.1	46.2
HQ and subsidiary managers collectively assess alternative performance targets and attempt to reach consensus; the target that has the support of both is the one that is set	39	42.9	89.0
HQ managers select the performance target and submit it to the subsidiary managers for ideas and suggestions; HQ managers then make the decision	10	11.0	100.0
HQ managers select and set the subsidiary performance targets without consulting subsidiary managers	0	0.0	0.0
Not determined	2	MISSING	100.0
Not applicable	4	MISSING	100.0
TOTAL	97	100.0	

N = 91

percent of the total). or on the basis of the subsidiary budget adapted to the company's overall objectives (14 percent) - see Table 12.VIII. In only 9 corporations (10 percent) are targets determined without reference to the budget. In such cases targets were found to be determined either on the basis of the company's overall objectives, or by management judgement.

Targets assigned to foreign subsidiaries in a company may simply vary in value from subsidiary to subsidiary or, more extensively, they may vary in nature. The former involves the assignment to subsidiaries of different target values based on the same indicators. This is the case of companies which use the same set of performances indicators - e.g. ROI, profit, cash flow, market share, etc. - for all subsidiaries, but which adapt the target values of such indicators to the specificity of each operation. On the other hand, changes in the nature of targets assigned to subsidiaries, involve the use of different target performance indicators across foreign operations (e.g. company where targets set for some subsidiaries are based on ROI and return or sales, and where targets set for other subsidiaries are based on manufacturing efficiency and product quality). The variability of subsidiary performance targets across a company's set of foreign operations is explored in the study. Respondents were asked to rate on a 1 to 5 scale the extent to which the value and the nature of performance targets vary among subsidiaries in their firms. Results are tabulated in Table 12.IX. Variation in the value of targets is very extensive: nearly three companies in four (73 percent of the total) said that in their firms performance targets vary from moderately to very extensively across foreign operations. In contrast, variation in the nature of the targets is rather limited: less than one company in four (22 percent) revealed to apply at least to a moderate extent different target indicators to foreign subsidiaries. Application of the Wilcoxon test, which produced a significance level of 0.099 percent or less confirms that variation in the value of the targets is, in a statistical sense, significantly more extensive than variation in the nature of the targets - Table 12.IX. It seems reasonable to assume that a change in the nature of the targets assigned to the different subsidiaries of a MNC offers a better method of accounting for the differences among the subsidiaries

Table 12.VIII - Bases Used for Setting Up Foreign Subsidiaries' Performance Targets

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)
Subsidiary budget	70	75.3
The company's overall objectives, with no explicit reference to the subsidiary budget	4	4.3
Management judgement (either at HQ or subsidiaries), with no explicit reference to company's objectives or the subsidiary budget	5	5.4
Subsidiary budget adapted to the company's overall objectives	13	14.0
Other - Targets are directly linked to the three-year plan	1	1.1
Not applicable	4	MISSING
TOTAL	97	100.0

N = 93

Table 12.IX - Extent of Variability of Performance Targets Across Foreign Operations

	R A T I N G					STATISTICS		WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST		
	1	2	3	4	5	N	Median	Cases	Z	Two-Tailed Probability
	Very Little		To a Moderate Extent	Very Extensively						
Variation in the <u>value</u> of targets	8	17	24	23	20	92	3.38	90	-6.614	(0.000) ***
	27.2%		72.8%							
Variation in the <u>nature</u> of the targets	46	24	12	4	4	90	1.48			
	77.8%		22.2%							

** significant $p < 0.01$ (i.e.1%)

than a simple change in the value of the targets. This being so, the result reported here indicates that firms are generally employing less elaborate forms of standard setting, which may not adequately reflect the specificity of each subsidiary.

A number of reasons were given by company executives to justify the use of different performance targets. They can be grouped into two major categories: reasons dealing with the nature and prospects of the business of the subsidiary, and reasons relating to the specific economic and non-economic (mainly political) conditions found locally. The nature of the subsidiary business naturally ought to influence the type of target assigned. In one company, it was found that production and marketing oriented subsidiaries have completely different types of targets to achieve. In another company, the nature and value of performance targets are adapted to the principal activity of the subsidiary, either this is contracting, manufacturing, or distribution. In yet another case, only the values of targets vary; this company is involved in three main activities and assigns different ROIs (the company's prime target) to the subsidiaries in accordance with their dominant activity: contracting subsidiaries are set ROIs in the region of 30 percent, subsidiaries in engineering services are given ROIs of 40 percent, and subsidiaries in asset intensive industries, ROIs of 15 percent. Market situation including level of competition in countries where subsidiaries operate was also found to be an important factor in the setting of targets. In the words of one executive: "the questions we ask ourselves are - is the market mature?; are we looking for rapid market growth?; is cash generation more important than market share?" Local economic and political environmental conditions generally influence both the value and the nature of the targets set for subsidiaries. Several companies explicitly mentioned local environment as a major influence in the determination of targets. One particular manager emphasized the fact that his company operates in countries whose inflation rates range from less than 4 percent to more than 400 percent. Political risk was also often mentioned as an important factor influencing the determination of targets. According to one executive, performance targets are suited to local environments, with the objective of achieving from subsidiaries the "possible best", which in many cases

can only be the "minimum acceptable".

As can be seen, there are many factors that may explain why performance targets are different either in value or in nature among a company's foreign subsidiaries. A manager in a corporation where targets of different nature are used declared that "the reasons [for employing different targets] are almost endless - different subsidiary size, structure, history, market, national economy, growth expectations or requirements, and so on and so forth". In another company, where targets assigned to subsidiaries tend to vary substantially in value, and not so much in nature, the executive contacted summarized the situation in his firm this way: "For an international group operating worldwide there are differing environments and changing/developing long term strategies. In assessing the values [of targets], different rates of cash flow, return on investment, and dividends are assessed taking into account different types of business, high or low risk, and competitive rate of return in individual national environments".

12.2.3. Differences in Assessment Criteria Among Subsidiaries

So far, the formal assessment criteria (i.e. items in the internal reporting system, performance measures and standards) used in the control and evaluation of foreign subsidiaries' operating performance, have been described for the typical (i.e. most common) case in each company⁽¹⁾. However, the use headquarters executives make of the information reported by subsidiaries in the internal reporting system, as well as the nature of the performance measures and standards executives employ in the evaluation and control process, are likely to differ among a company's set of foreign operations. Table 12.X reveals that the absolute majority of companies (63 percent, i.e. 61 corporations) attempt to adjust the formal assessment criteria to special circumstances associated with subsidiaries. Among these, 9 companies (9 percent of the total) use totally different assessment criteria across their foreign operations. In 52 companies (54 percent of the total), the criteria tend to be similar for all subsidiaries

Table 12.X - Variability of the Formal Criteria Regularly Used by HQ to Control and Evaluate Operating Performance of Foreign Subsidiaries

	ABSOLUTE FREQUENCY	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
Companies use the same formal assessment criteria and the same weights for all foreign subsidiaries	35	36.5	36.5
Companies use the same formal assessment criteria but with different weights	52	54.2	90.6
Companies use different formal assessment criteria	9	9.4	100.0
Not determined	1	MISSING	100.0
TOTAL	97	100.0	

N = 96

abroad; nevertheless, the relative weight attributed to data, measures, and standards varies according to the nature of the subsidiary. In contrast, criteria and relative weights were considered identical for all overseas operations in 35 companies (i.e. 37 percent of the total).

Table 12.XI lists major factors which determine the use of different assessment practices (weights and criteria) to control and evaluate foreign subsidiaries' operating performance. Respondents were provided with a list of factors and were asked to rate in a scale of 1 to 5 the influence that each factor had in determining differences in assessment practices across their company's foreign operations. The particular characteristics of the host country environments, posing special threats or opportunities to subsidiaries were considered the most influential factor (median of 3.9). Two thirds of the respondents said that differences in host environments had a major influence (rated 4 or 5) in the use of different assessment practices among subsidiaries. Also of substantial importance were considered factors such as unsatisfactory performance level of subsidiaries, strategic importance of subsidiaries for the company as a whole, and geographic location of subsidiaries. All these factors were regarded by more than half of the respondents as having a major influence in the use of different assessment practices for different overseas units. Size of subsidiaries, ownership share, type of responsibility, and dominant managerial function in subsidiaries (all with medians near or below the "moderate influence" point), were also considered as justifying the use of different assessment practices. One factor frequently mentioned by companies, and which is presented in the "other" category is the nature or type of business in subsidiaries. Its median rating of 4.8 is extremely high. - Table 12.XI.

Table 12.XI - Factors Which Influence the Use of Different Weights or Criteria in the Formal Control and Evaluation of Foreign Subsidiaries' Operating Performance

	R A T I N G					S T A T I S T I C S	
	1 Minor Influence	2	3 Moderate Influence	4	5 Major Influence	N	Median
Particular characteristics of the host environment, posing special threats and/or opportunities to subsidiary	3	4	12	22	15	56	3.91
	33.9%			66.1%			
Unsatisfactory performance level of subsidiary	9	6	9	18	13	55	3.69
	43.7%			56.3%			
Strategic importance of subsidiary for the company as a whole	6	7	11	18	12	54	3.67
	44.5%			55.5%			
Geographic location of subsidiary (e.g. Europe, Latin America, Africa, etc)	4	5	17	14	14	54	3.57
	48.2%			51.8%			
Size of subsidiary	8	11	12	18	4	53	3.13
	58.5%			41.5%			
Ownership share in subsidiary (i.e. wholly owned vs. partly owned subsidiaries or joint ventures	6	11	7	9	6	39	2.86
	61.5%			38.5%			
Type of Responsibility assigned to subsidiary (i.e. sub-sy. as a profit-centre vs. sub-sy. as a cost centre)	3	9	6	5	5	28	2.83
	64.2%			35.8%			
Dominant managerial function in subsidiary (e.g. marketing-oriented sub-sy. vs. production-oriented sub-sy.	7	8	10	6	4	35	2.75
	71.5%			28.5%			
Other factors - nature or type of business in sub-sy.	0	0	0	2	4	6	4.75

12.2.4. Differences in Assessment Criteria Used for Subsidiaries and for Managers

The assessment practices described so far in this section, were referred to the evaluation and short term control of foreign subsidiaries' operating performance. The criteria used in companies' headquarters to assess the performance of the managers responsible for subsidiaries will now be described and compared with criteria used to assess subsidiaries' operations.

In the great majority of companies (80 percent of the total, i.e. 75 cases), managerial performance was found to be formally assessed by headquarters. Only in a limited number of cases (20 percent i.e. 19 companies), the performance of subsidiary managers is not assessed on the basis of formal criteria - Table 12.XII. Here, the evaluation of subsidiary managers tends to be based on the personal judgements by the senior U.K. executives responsible for the ultimate success of the respective overseas operations. In one company, where an interview was conducted, the assessment of managerial performance was said to be "extremely formal for domestic operations (subsidiaries are much closer to parent, and are easier to understand)", whereas for overseas operations the assessment was considered more "informal and subjective". Among the 75 companies which formally evaluate managerial performance, 60 (i.e. 80 percent) use the internal reporting system operated between subsidiaries and headquarters as the informational source on which the performance of managers is formally assessed - Table 12.XIII. In the other 15 corporations (i.e. 20 percent) managerial assessment extends beyond the analysis of subsidiary results presented in the reporting system into areas related to the personal performance of the managers. Almost all companies in this category referred to an appraisal system based on "personnel" criteria. The detailed analysis of such criteria, which are associated with areas of Personnel or Human Resources Management, is beyond the scope of this study. As an illustration, a few examples are provided. In one company, the personnel criteria employed was said to be related to a formal system of management succession and

Table 12.XII - Formal Assessment of Foreign Subsidiary Managers

	Absolute Frequency	Adjusted Frequency (percent)
Headquarters formally assess managerial performance	75	79.8
There is no formal assessment by HQ of managerial performance	19	20.2
Not determined	3	Missing
TOTAL	97	100.0

**Table 12.XIII - The Internal Reporting System as the Source of
Information on Which the Assessment of Managerial
Performance is Based**

	Absolute Frequency	Adjusted Frequency (percent)
The formal assessment of managerial performance is based on info. provided by the internal reporting system	60	80.0
The formal assessment of managerial performance is NOT based on info. provided by the internal reporting system	15	20.0
TOTAL	75	100.0

Table 12.XIV - Differences Between the Formal Assessment Criteria Used for Managers and for Subsidiaries

	Absolute Frequency	Adjusted Frequency (percent)
When the formal assessment of managerial performance is based on info provided by the internal reporting system, how do the formal criteria used to assess the performance of managers compare with those used to evaluate the performance of subsidiaries?		
.The same (managerial performance is totally identified with subsidiary performance)	22	36.7
.Little different	35	58.3
.Substantially different	3	5.0
.Entirely different (totally separate criteria are used)	0	-
TOTAL	60	100.0

development. In another case, managers' performance was found to be associated with subsidiaries' performance with the difference that managers are asked an extra objective related to training of the local workforce. In one company, headquarters executives revealed that they were applying to the most important subsidiaries a fairly complex system based on the principles of MBO (management by objectives). One executive interviewed said that in his company "managerial appraisal is made against an agreed tasks/management action programme". According to another executive, "subsidiary performance is taken into account in the evaluation of subsidiary managers, but is not the only basis of assessment; in other words, the reporting system is one aspect, but man management, product development, team development, etc., are equally important". In many cases, managerial performance assessment was found to be tied up with supplemental compensation and bonuses.

Among the 60 companies where the formal assessment of foreign subsidiary managers is based on information provided by the internal reporting system, 22 corporations (i.e. 37 percent) use exactly the same formal assessment criteria to evaluate the performance of managers and that of operations. For such companies, managerial performance is totally identified with subsidiary performance. In 35 firms (58 percent), criteria used for managers and operations are said to be little different, and in only 3 companies (5 percent) they were considered substantially different - Table 12.XIV. The differences in assessment criteria, either limited or substantial, stem from the perception that results obtained by subsidiaries ought to be sensibly interpreted when it comes the time to assess the managers responsible for the subsidiaries. The concept expressed in the sentence "a manager may be performing well in a poor business", reflects the awareness on the part of a number of headquarters executives that there are good reasons to differentiate between the two types of formal performance assessment. To cite a couple of examples, in one company foreign subsidiary managers are evaluated taking into account subsidiary results forwarded via the reporting system, but, in the words of an executive, "objective view must be taken on resilience and effort as applied to local problems". In another company, although the criteria employed in the assessment of managers and operations are

apparently similar, the executive interviewed said that "[in our group] the evaluation of the manager can be different to that of the company in that the manager's contribution is assessed taking into account the situation he inherits and the nature of the problems he encounters; poor financial results do not necessarily mean bad management".

12.2.5. Discussion and Conclusions

This section surveyed companies' practices in the formal evaluation and control of foreign subsidiaries and their managers. It started by describing which information is formally used by headquarters executives to monitor the performance of units operating overseas. Such an information is provided by the internal reporting system institutionalized in companies between subsidiaries and headquarters, and in this sense the present section constitutes an extension of the previous chapter.

The results reported above emphasize the crucial role played by the internal reporting system as a source of information for the evaluation and control of foreign subsidiaries. As it was demonstrated earlier in chapter 6, most empirical studies on performance evaluation in MNCs focused on a number of individual measures of subsidiary performance such as ROI, profit, RI, return on sales and so on, and overlooked the use of the usually abundant information that is reported through the internal reporting system. This study's results confirmed the impression obtained in talks and interviews with executives conducted prior to the formulation of the questionnaire, that the continuing process of subsidiary performance evaluation relies more on the information submitted in the internal reporting system, taken as a whole, than on separate performance indicators either directly forwarded by subsidiaries or calculated in headquarters on the basis of the information contained in the reporting system.

The content of the internal reporting system is wide in nature, as seen in the previous chapter, and includes both financial and non-financial items of information. Among the former, the subsidiaries profit and loss account, the statement of cash flow generated in subsidiaries, and up-dates of the year-end profit forecasts were considered to be the most useful in controlling and evaluating foreign subsidiaries. Among the latter, physical inventory levels, production output, and market share were regarded as the most useful. Despite the apparent preference in general for financial items of information, non-financial information was often attached high levels of usefulness, and its importance for the performance evaluation process cannot be denied. Many empirical studies (see chapter 6), by concentrating solely on financial information were excluding a very relevant dimension, whose study is vital for the understanding of performance evaluation and control in MNCs.

As just mentioned, besides the information supplied via the internal reporting system, managers in headquarters monitor the performance of foreign subsidiaries with the help of a battery of indicators which are normally used independently of the reporting system. The performance indicators most widely used and simultaneously considered the most useful are total income and ROI, either taken in isolation or compared with budget. Other measures frequently used include return on sales and cash flow. As to RI, an indicator which received a substantial amount of attention when major performance measures were reviewed (chapter 5), only slightly more than half of the companies surveyed were employing the method. These results agree with the surveys of American MNCs, where operating budget comparisons, ROI, and profit were generally the favourite assessment techniques (chapter 6). Similarly, RI was found in such surveys to be scarcely used. Although a comparison of results between different studies requires caution, it appears fair to say that the present research suggests that RI, despite its scarce use in both sides of the Atlantic, is, nevertheless, more frequently encountered in British than in American multinationals. This would confirm a similar finding in Scapens and Sale [1981] for divisionalized (domestic) firms.

The use of information for subsidiary performance evaluation and control involves comparisons of actual results against certain yardsticks or standards (see chapter 4). Two standards of performance were encountered in virtually every company: targets previously set for subsidiaries, and the past actual results of subsidiaries. As expected, the setting of targets was found to be essentially linked to the budget. As discussed in Chapter 5, the budget represents a powerful integrated instrument of subunit performance evaluation, and it is often used as the major yardstick against which actual results are compared. Surveys on performance evaluation practices in MNCs (chapter 6) were unanimous in emphasizing the important role of the budgetary system in the evaluation process and its widespread use among corporations. Here, the budget was similarly found to be employed by nearly every company. Moreover, in nine cases out of ten it was being used as a basis for setting up foreign subsidiaries' targets. As to past subsidiary results, the other standard of performance universally used, the findings of this study agree with those of Morsicato [1980] where historical data were revealed to be the most common basis of comparison of subsidiary results.

Subsidiary targets may take into account, to a varying degree, the specificity of each operation. Such a quality of the targets may be reflected in the extent to which they change in value and in nature across subsidiaries, and in the degree of participation of the subsidiary managers in the setting of the targets. The results showed that local management participation in target setting is usually high, and that the value of the targets vary extensively from one subsidiary to another in a same MNC. However, in what concerns a variation in the nature of the targets, it was found that only a minority of companies were applying different target indicators to different foreign subsidiaries. Variation in the nature of the targets was assumed to offer a better method of accounting for the differences among the operations of a corporation than a simple change in the value of the targets. Therefore, it may be concluded that companies although using methods or standard setting that allow at least some sensitivity to the particular conditions faced locally are not generally employing the more elaborate forms at their disposal.

The assessment of the capability of evaluation systems to take into account the specificity of each subsidiary was taken one step further by analysing the variability of the overall formal performance evaluation criteria. This involves not only the standards utilized, but also the items included in the internal reporting systems and the individual indicators that are employed in the subsidiary performance evaluation and control process. Nearly two thirds of all companies attempt to adjust the formal assessment criteria to special conditions encountered in foreign subsidiaries, although only a very small minority employ totally different criteria across their overseas operations. The majority tend to use similar criteria simply adapting the relative weight attributed to data, measures, and standards to the nature of each subsidiary. The conclusions reached above about the variability of standard setting apply here in this broader context, since it appears that most companies adapt only in a moderate way their formal performance evaluation criteria to the specificity of each operation. Generally, they do not use the more elaborate approaches, more radical in the level of variability of the criteria used.

A comparison of the factors that determine the use of different assessment practices in a MNC revealed that local environmental conditions faced by subsidiaries were of prime concern. In fact, the particular characteristics of the host environments that pose special threats and opportunities to operations overseas were considered the most influential factor in the use of different evaluation criteria. Other important factors include unsatisfactory performance level of subsidiaries, strategic importance of subsidiaries for the MNC as a whole, and geographic location of subsidiaries.

Earlier in chapter 4, a distinction was drawn between two objects of control: output and behaviour. While the former is concerned with the economic performance of an organizational subunit, the latter deals with the performance of the management responsible for the subunit. In another place in this study (chapter 6), a conclusion was reached that despite the universal prescription in the theory of different evaluation criteria for the performance of units and managers,

companies were in practice employing virtually the same criteria for both purposes (e.g. Morsicato [1980]; Choi, Czechowicz and Bavishi [1982]). The present study, although obtaining a similar result, revealed that personal and informal judgements at headquarters level normally are deemed to compensate for the similarity of the assessment criteria formally employed. In reality, a great number of cases use the same or little different formal assessment criteria for subsidiaries and for managers. However, the interviews showed that parent company executives normally kept in mind that poor results do not always mean bad management, and so they employ subjective criteria to differentiate the performance of the subunit from that of the manager. It is noteworthy that in a minority of cases, nevertheless, the formal assessment of managerial performance is based on specific criteria, and uses information that is not provided via the internal reporting system. In such cases the appraisal system is based on formal "personnel" criteria, and sometimes sophisticated techniques such as MBO are used.

This section has described the assessment criteria (i.e. items in the internal reporting system. performance measures and standards) used by companies in the short term control and evaluation of foreign subsidiaries' operating performance. A major objective of the present study is to understand how performance evaluation criteria employed in the assessment of foreign subsidiaries and managers take into consideration the variability of external environmental influences to which overseas operations are subject. Such understanding requires some knowledge of how headquarters executives perceive the influences exerted by foreign environments on subsidiaries' operations, and how they perceive the adequateness of the evaluation criteria employed in their companies as regards the variability of environmental influences. This will be the object of the next section.

12.3. Impact of Foreign Environments on Subsidiaries' Operations and Effectiveness of Performance Evaluation Criteria in Taking Account of the Environmental Impact

12.3.1. Perceptions of the Variability of Foreign Environments

A list containing a number of environmental factors that may have an impact (either favourable or unfavourable) upon subsidiaries' activities, and whose relevance may vary from one geographic area to another, was included in the questionnaire. Respondents were asked to rank for each geographic area where their companies operate, up to eight environmental factors which in their opinion exert the highest influence on subsidiaries' operating performance. Table 12.XV presents the median rankings obtained for each environmental factor. Items that were considered most influential for a given geographic area, that is items that were ranked by respondents, were coded 1 to 8 according to the respective position in the ranking (1= the most influential factor; 2 = the second most influential factor; etc.). Items that were not considered among the most influential ones, that is items that were not assigned a rank by respondents, were coded 10. Therefore, the lower the median, the more influential the respective environmental factor is considered to be.

A different set of influential environmental factors were pointed out by respondents. for each geographic area. This supports the view that headquarters managers perceive the environments where subsidiaries operate as different from one another. The factors that were regarded as most influential in each geographic area are presented below by order of ranking. Only items with median rankings of less than 9 were selected.

Europe - Economic growth/stagnation. Market size. Inflation rates.
Exchange rates.

U.S. and Canada - Market size. Economic growth/stagnation. Inflation rates. Attitude towards achievement and work. Exchange rates.

Australia and New Zealand - Economic growth/stagnation. Market size. Inflation rates.

Latin America - Inflation rates. Exchange rates. Political stability. Restriction on movements of capital across borders. Price and other governmental controls. Economic growth/stagnation. General attitude towards foreign companies.

Africa - Political stability. Economic growth/stagnation. Import-export controls. Restrictions on movements of capital across borders. Market size.

Middle East - Political stability. Market size. Economic growth/stagnation. Language, religion, and other cultural factors. Legal structures in terms of business law and labour law. General attitude towards foreign companies. Availability of infra-structures (e.g. communications, transportation, housing).

Asia - Economic growth/stagnation. Political stability. Market size. Language, religion, and other cultural factors. Price and other governmental controls.

It is interesting to note that very similar factors were indicated for Europe, U.S. and Canada, and Australia and New Zealand. The factors that are common to these three geographic areas are all of an economic nature (economic growth/stagnation, market size, inflation and exchange rates). Note that North America was the only geographic area in the world for which respondents said that the general attitude towards achievement and work is an influential factor on business operations. Latin America, Africa, the Middle East, and Asia differ from the group of countries previously mentioned mainly because together with a few economic factors (economic growth/stagnation, market size), respondents stressed a number of environmental

Table 12.IV - Influence Exerted by Environmental Factors on Subsidiaries' Operating Performance, in Each Geographic Area

	Europe	US and Canada	Latin America	Africa	Middle East	Asia	Australia & N.Zeal.
Political stability	9.68 N=49	9.58 N=59	3.50 N=18	3.00 N=39	2.67 N=17	4.83 N=26	9.72 N=45
Labour strikes and social unrest	9.75 N=48	9.84 N=59	9.77 N=19	9.86 N=40	9.79 N=17	9.78 N=26	9.54 N=44
Attitude toward achievement and work	9.67 N=48	7.00 N=59	9.91 N=19	9.80 N=39	9.73 N=17	9.63 N=26	9.82 N=45
General attitude toward foreign companies	9.80 N=49	9.81 N=59	8.00 N=19	9.70 N=40	7.25 N=17	9.69 N=26	9.65 N=44
Language, religion, and other cultural factors	9.92 N=49	9.89 N=59	9.97 N=19	9.86 N=40	6.25 N=17	7.50 N=26	9.89 N=45
Economic growth/stagnation	2.56 N=49	2.85 N=59	6.75 N=19	3.75 N=39	5.00 N=17	3.75 N=26	2.67 N=44
Taxation	9.70 N=48	9.55 N=59	9.55 N=19	9.80 N=39	9.73 N=17	9.74 N=26	9.75 N=45
Availability of infra-structures (e.g. communications, transportation, housing)	9.96 N=48	9.91 N=59	9.94 N=19	9.88 N=40	8.00 N=17	9.78 N=26	9.96 N=45
Availability of cash/capital	9.79 N=48	9.76 N=58	9.64 N=19	9.80 N=39	9.85 N=17	9.78 N=26	9.77 N=44
Restrictions on movements of capital across borders	9.92 N=49	9.92 N=59	5.00 N=19	6.38 N=39	9.85 N=17	9.78 N=26	9.89 N=45
Import-export controls	9.94 N=49	9.90 N=59	9.77 N=19	6.17 N=40	9.93 N=17	9.74 N=26	9.80 N=45
Price and other Governmental controls	9.61 N=48	9.86 N=58	5.13 N=19	9.53 N=39	9.79 N=17	8.50 N=26	9.67 N=43
Legal structures in terms of business law and labour law	9.85 N=48	9.87 N=59	9.82 N=19	9.85 N=39	6.75 N=17	9.78 N=26	9.84 N=45
Inflation rates	4.80 N=49	6.00 N=59	1.94 N=19	9.63 N=40	9.93 N=17	9.82 N=26	5.31 N=45
Exchange rates	5.75 N=50	8.30 N=60	3.40 N=19	9.63 N=40	9.73 N=17	9.57 N=26	9.52 N=45
Market size	3.29 N=49	2.67 N=59	9.77 N=19	7.50 N=40	4.00 N=17	6.83 N=26	3.30 N=40
Cost of production inputs	9.63 N=49	9.72 N=59	9.91 N=19	9.87 N=39	9.93 N=17	9.74 N=26	9.72 N=45
Others - State of the crude market (Middle East); competition (Europe, N.America, Asia & Australasia); trade credit (Europe, N.America); interest rates (Europe, N.America); political/economic pressures applied externally on South African companies; etc.	9.97 N=49	9.97 N=59	10.00 N=19	9.97 N=40	9.93 N=17	9.96 N=26	9.99 N=45

NOTES: Median rankings are provided for each cell. For each geographic area, items were ranked 1 to 8 if considered among the eight most influential factors on subsidiaries' operations (1 = the most influential factor; 8 = the eighth most influential factor). Items were given the rank 10 if not considered among the most influential factors.
N represents the number of valid cases. Its variation in column is due the fact that the number of multinationals operating in each geographic area varies widely.

influences of a political, legal and social nature.

Political stability was considered among the three most influential environmental factors in Africa, the Middle East, Asia, and Latin America. The general attitude towards foreign companies was ranked among the most relevant factors in the Middle East and Latin America. Language, religion and other cultural factors were pointed out as influential environmental characteristics in the Middle East and Asia. All these are factors of political, social/cultural nature. Environmental factors associated with the local legal requirements were also mentioned frequently by respondents. In fact, restrictions on movements of capital across borders are among the most influential characteristics of the environments of Latin America, and Africa. Import-export controls were considered an influential factor only in Africa, and price and government controls were ranked among the most influential environmental characteristics of Latin America and Asia. The local legal structures in terms of business law and labour law were selected as a relevant factor in the Middle East. These findings stress the importance attributed by headquarters executives to non-economic characteristics of the environments, especially in areas of the Third World. Note, however, that for Latin America the two most highly ranked environmental factors are of an economic nature - inflation rates, and exchange rates. Hardly surprising for a region shaken by three-digit levels of inflation.

12.3.2. Perceptions of the Actual and Desired Effectiveness of Assessment Criteria in Taking Account of the Variability of Foreign Environments

Having identified for each geographic region those environmental factors which are most influential on subsidiaries' operating performance, the study now attempts to determine how effectively, in headquarters executives' opinion, the formal assessment criteria actually operated in companies take account of such factors. Results are presented in Table 12.XVI. The level of effectiveness of the assessment criteria employed for subsidiary operations, and for

subsidiary managers, was considered similar by respondents (median ratings of 3.1 for both situations)⁽²⁾. More than half of the respondents believe that the assessment criteria they use to evaluate subsidiaries and managers are moderately effective. Only in a relatively small proportion of cases (15 and 17 percent) were criteria considered not at all or little effective.

Table 12.XVI also shows the opinion of headquarters executives as to the extent to which formal assessment criteria should ideally be able to take account of relevant foreign environmental factors. Similar results were also obtained here for the evaluation of subsidiaries and managers (median ratings of 3.3 and 3.4 respectively)⁽²⁾. This means that executives in parent companies believe that the criteria employed in both assessment situations should be able to recognize, to a similar extent, those characteristics of the local environments which most affect operations. Slightly less than half of the respondents (46 and 45 percent) said that performance criteria should be able to capture to a moderate extent environmental differences. A substantial number of executives (40 and 43 percent) believed that criteria should capture to a great extent (rated 4 or 5 in a 5-point scale) such environmental differences.

To compare the judgements of headquarters managers as to the actual and desired level of effectiveness of performance evaluation criteria in taking account of relevant environmental influences, a test of differences was conducted. The test was based on the Wilcoxon matched-pairs signed-ranks statistic, since the variables in question are all at the ordinal-level of measurement. Results, presented in Table 12.XVII, show that headquarters executives would like the assessment criteria used in their firms to reflect environmental influences to a greater extent than they actually do. These findings apply both to the evaluation of subsidiaries (level of significance of 2.7 percent), and to the assessment of managers (level of significance of 0.1 percent).

As an illustration of what has been described as the executives' perceptions, the following cases are mentioned. Some managers who rated low the effectiveness of actual assessment criteria, and at the

Table 12.XVI - Headquarters Executives' Opinion As to the Actual and Desired Capability of Formal Assessment Criteria to Take Account of Relevant Foreign Environmental Factors

	R A T I N G					STATISTICS	
	1 Not at all	2	3 Moderately	4	5 Very Much	N	Median
Actual Capability of Criteria:							
In the control and evaluation of subsidiary operations	5 └────────┘ 14.6%	9	53 55.2%	26 └────────┘ 30.2%	3	96	3.14
In the assessment of subsidiary managers	5 └────────┘ 17.4%	10	46 53.5%	24 └────────┘ 29.1%	1	86	3.11
Desired Capability of Criteria:							
In the control and evaluation of subsidiary operations	1 └────────┘ 13.7%	12	44 46.3%	27 └────────┘ 40.0%	11	95	3.28
In the assessment of subsidiary managers	1 └────────┘ 11.6%	9	39 45.3%	28 └────────┘ 43.1%	9	86	3.35

Table 12.XVII - Wilcoxon Matched Pairs Signed-Ranks Test to Compare Differences in Judgement as to the Actual and Desired Capability of Formal Assessment Criteria to Take Account of Relevant Foreign Environmental Factors

	Variables	Cases	Z	Two-Tailed Probability
CONTROL AND EVALUATION OF SUBSIDIARY OPERATIONS:				
Actual capability of criteria	AEFFSUB	94	-2.218	(0.027)
Desired capability of criteria	DEFSUB			*
ASSESSMENT OF SUBSIDIARY MANAGERS:				
Actual capability of criteria	AEFFMAN	84	-3.178	(0.001)
Desired capability of criteria	DEFFMAN			**

NOTES: ** significant $p \leq 0.01$ (i.e. 1%)
 * significant $0.01 < p \leq 0.05$

same time rated high the desirability of such criteria taking into account the environment, said that performance evaluation methods have not been changed in their firms because they do not believe that formal criteria could ever be effective in recognizing environmental influences. In these cases, the informal aspects of assessment are given a substantial amount of importance. In the words of some managers: "We do not attempt to take these [environmental] factors into account in the FORMAL performance evaluation criteria. However, performance evaluation is always carried out paying attention to environmental factors, because we like to see subsidiaries minimizing exposure wherever possible". "Formal criteria can never be effective over a wide range of different environments". "It is very difficult to be formal about such matters". And, "[to recognize the environment] more subjective, multidimensional judgement is appropriate".

When asked which significant environmental factors are not adequately taken into account by the formal performance evaluation criteria in the assessment of subsidiaries and managers, executives provided a list of factors that differ from case to case. Some companies emphasized local governmental pressures over business, and general political/economic instability, whereas others stressed cultural and social features of the local environments such as language. attitude to work, attitudes regarding financial and accounting information, market understanding, people motivation, strikes, social unrest, and ability to influence local official administration. A large number of managers mentioned economic factors. like volatility of exchange rates, cost effectiveness. taxation, local economic growth. currency risk. cost of funds, performance of competitors. and market capacity available at different periods. According to one manager interviewed the main problem of the assessment criteria employed in his firm is that "missed opportunities are not identified, and management development is not formally recognized". In another case, it was said that shortcomings of the evaluation criteria evolve around, and are mainly due to the timing, quality and foresight of the data on which criteria are based.

12.3.3. Discussion and Conclusions

After having discussed the features of the performance evaluation systems in operation in MNCs, it is considered important that the perceptions of headquarters executives relative to the effectiveness of the evaluation criteria in reflecting the diversity encountered in the foreign environments are explored. For a better understanding of the managers' perceptions in this respect it is considered useful to discover their opinion as to the variability of the characteristics of the foreign environments operated by their companies.

The study revealed that headquarters managers tend to perceive the environments where subsidiaries operate as different from one another. In fact, for each geographic area a diverse set of environmental factors seen as having the highest influence on subsidiaries' results were selected by respondents. There was a certain similarity among the factors indicated for Europe, U.S. and Canada, and Australia and New Zealand, insofar as a marked propensity for economic characteristics of the environments was consistently shown. For the other areas, namely Latin America, Africa, the Middle East, and Asia a greater variety of factors was mentioned with emphasis on those of a political, legal and social nature (e.g. political stability in Africa and the Middle East; inflation rates in Latin America; language, religion, and other cultural factors in the Middle East and Asia; restrictions on movements of capital across borders in Latin America and Africa).

As regards the perceptions of managers as to the effectiveness of formal assessment criteria in taking account of relevant local environmental factors, it was found that, in the great majority of the cases, executives believe that the assessment criteria used for subsidiaries and managers are at least moderately effective in taking account of the environment. A different conclusion was reached in studies on American multinationals reviewed in chapter 6, namely Morsicato [1980], and Choi, Czechowicz and Bavishi [1982]. In both of these surveys, the majority of the respondents thought that their

systems included environmental differences less than moderately. Although it is not possible to directly compare the results of this with other studies, it appears that, in executives' opinion, performance evaluation systems in British MNCs take to a greater extent account of environmental factors than the systems operated in American MNCs. This reinforces a similar conclusion suggested in the comparative study of Choi, Czechowicz and Bavishi [1982] (see chapter 6).

Despite the fact that in most cases the formal assessment criteria used is perceived to be at least moderately effective in taking account of the environment, executives believe that the criteria should reflect environmental influences to a greater extent than they actually do. This finding applies equally to the criteria employed in the evaluation of subsidiaries and in the assessment of managers. This is an important result since it shows that the actual capability of the evaluation systems to take account of environmental differences lags generally behind managers' requirements. In this respect, the present study agrees with Morsicato [1980], where most managers reported that systems had been designed to include environmental differences to a smaller extent than they would personally like. In the present study, this discrepancy between the actual and the ideal capability of the systems, coupled with the fact that they were generally believed to reflect the environment to a relatively high extent, seems to suggest that executives' requirements of the degree of environmental sensitivity to be possessed by evaluation systems are extremely high. This may be interpreted as a measure of the importance of the environmental issue for the performance evaluation process.

12.4. Findings on Criteria Used to Assess Foreign Subsidiaries' Operating Performance and Companies' Characteristics

The previous sections described how MNCs control and evaluate the operating performance of overseas subsidiaries, and how they assess their managers. The perceptions of executives who in headquarters are responsible for performance evaluation regarding the impact of foreign environments on subsidiaries' operations were also investigated above. The present section now attempts to explore relationships between characteristics of the formal performance evaluation criteria and companies' features such as size, international experience, exposure to host country influence, etc. Also relationships between characteristics of the evaluation criteria and perceptions of executives involved in performance assessment are explored here. As in the previous chapters, the analysis follows a sequence of major tests, each of which is motivated by an hypothesis established a priori. These hypotheses are statistically tested using a decision model which was described in chapter 10 (section 10.2).

Test 1

This first test does not derive from the main hypotheses of the study enunciated in chapter 7, rather being prompted by the results obtained when companies' practices were examined. As it was suggested in section 12.2., it is of interest to determine whether the degree of usefulness for performance evaluation attributed by headquarters executives to the items included in companies' internal reporting systems, are associated with the reporting frequency of the same items. In other words, it is desirable to determine whether the companies that rated low the usefulness of a certain item are simultaneously those that have the item in their internal reporting system submitted by foreign subsidiaries on an occasional, non-regular basis. Alternatively, companies which rated high a certain item would be those that have the item submitted by foreign subsidiaries on a

regular and frequent (e.g. monthly) basis.

If this relationship holds, it will indicate that the frequency with which items of information are reported by subsidiaries reflects the degree of interest showed by headquarters executives on the individual items. This can be seen as an indicator, however rough, of the quality of the match between the internal reporting system in operation in companies and the information requirements of their users. The testing of this relationship involves the formulation of an hypothesis stating that there is an analogy between the way in which executives view the usefulness of items included in their companies' reporting systems, when controlling and evaluating foreign subsidiaries' operating performance, and the frequency with which subsidiaries are required to report such items.

The null hypothesis states that:

H₀₁ : there is no association between the level of usefulness attributed in a company to each item of information included in the internal reporting system, and the reporting frequency required for the item.

The variables involved in this test of independence are all 5- or 6-scale variables at the ordinal-level of measurement. For this reason, the chi-square statistic was used. A discussion of this statistical technique was presented in chapter 10 (section 10.3.).

Table 12.XVIII, where results of the tests are shown, reveals the existence of a statistically significant relationship between level of usefulness and frequency of reporting, for all but three of the items more commonly found in companies' internal reporting systems. This finding suggests that the frequency with which the reporting of each item of information included in the internal reporting system is required from subsidiaries is consonant with the way in which headquarters executives involved in the evaluation and control of foreign subsidiaries tend to value the item. It appears, therefore, that there is a reasonably good match between the internal reporting system and the users' information requirements.

Table 12.XVIII - Chi-Square Tests of Independence Between the Reporting Frequency of Items in the Internal Reporting System, and the Usefulness Attributed to the Items in Controlling and Evaluating Foreign Subsidiaries' Operating Performance

	χ^2	p	d.f.	N
Balance sheet for the period	6.56	(0.038) *	2	94
Up-date of the budgeted year-end balance sheet	11.68	(0.020) *	4	83
Profit and loss account	3.10 (a)	(0.078)	1	93
Up-date of the year-end profit forecasts	10.80	(0.005) **	2	91
Cash-flow generated in the subsidiary	6.57	(0.010) **	1	94
Sales per product or business	16.74	(0.0002) **	2	84
Borrowings in the subsidiary from local sources	0.84	(0.360)	1	95
Inventory levels (in quantity)	11.36	(0.003) **	2	64
Market share in host country	12.72	(0.013) **	4	60
Production output	22.92	(0.0000) **	2	68
Manufacturing capacity utilization	24.01	(0.0000) **	2	63
Labour relations	13.49	(0.001) **	2	52
Product quality	11.72	(0.003) **	2	50
Report on economic conditions in host country	5.05	(0.080)	2	76
Report on political, legal and social conditions in host country	6.04	(0.049) *	2	71

NOTES: ** significant $p \leq 0.01$

* significant $0.01 < p \leq 0.05$

(a) Chi-square subject to Yate's correction for continuity

Additionally, the results obtained in this test help, in particular, in explaining the relatively low level of usefulness attributed to reports on local political, legal and social conditions (see subsection 12.2.1.). As previously described, the incidence of such reports in companies' internal reporting systems was found to be very high. However, in nearly half of the cases these reports are not submitted regularly (once a year or more often), only being forwarded to the parent company on an occasional, sporadic way. Accordingly, the low general level of usefulness obtained is greatly influenced by this high percentage of cases for which the item is not reported on a regular basis, since, as the test shows, in these companies the item is likely to be perceived as having a low usefulness. This would contrast with the perceptions of managers in companies which have the item reported with frequency.

Summary: The test aimed at determining whether the judgements made by headquarters executives as regards the usefulness of items of information in controlling and evaluating foreign subsidiary performance were associated with the frequency with which such items were reported. Results show, with very few exceptions, that level of usefulness and reporting frequency of items included in companies' internal reporting systems are statistically associated in a positive way. This means that items perceived as more useful in evaluating subsidiaries' performance tend to be reported by subsidiaries more frequently (e.g. every quarter, or every month). On the other hand, items regarded as less useful, tend to be those whose reporting is requested from subsidiaries only occasionally or very seldom (e.g. once a year). This association indicates that the frequency with which individual items are reported corresponds to the information needs of their users.

Test 2

Section 12.2. above described the formal performance evaluation criteria employed in companies' headquarters in the evaluation and control of foreign subsidiary operating performance. The major components of the evaluation process, namely items included in the

internal reporting system that are employed in performance evaluation, ratios and other measures that are used in the monitoring of subsidiaries, and performance standards and targets assigned to operations, were all reviewed individually in order that a clear picture of companies' practices could emerge.

It was also seen earlier (chapter 3) that firms which have their operations scattered over a widespread range of countries are likely to have their subsidiaries subject to very different influences posed by the local environments where subsidiaries are established. An analysis of the most influential environmental factors by geographic area was conducted in the previous section (section 12.3.). There, a conclusion was reached that headquarters managers tend to perceive the environments where subsidiaries operate as different from one another.

An important objective of this study is to determine how the sensitivity of performance evaluation criteria to the impact exerted by local environments upon foreign subsidiaries' activities change in accordance to companies' characteristics (see chapter 7). The present test will attempt to measure such a sensitivity and to determine which company characteristics tend to be associated with performance criteria that are more likely to reflect environmental differences. It is expected that companies with, for instance, higher levels of internationalization, higher exposure to host country influence, higher international experience, and higher commitment to foreign operations will employ formal performance evaluation criteria that are capable of recognizing to a greater extent relevant environmental influences that differ from one geographic area to another.

Established in its directional form, the null hypothesis tries to demonstrate that:

- H₀₂: there is either no association or a negative association between the degree of sensitivity of a company's formal performance evaluation criteria to the impact of local environments upon foreign subsidiaries, and:
- . the dominant industrial activity of the international

- operations of the company;
- . the size of the company;
- . the level of the company's commitment to foreign operations;
- . the level of the company's internationalization;
- . the international experience of the company;
- . the organizational structure of the company;
- . the level of the company's exposure to host country and government influence;
- . the degree of strategic control exercised in the company by headquarters over foreign subsidiaries; and
- . the strategy adopted by the company.

The determination of the degree of sensitivity of formal performance evaluation criteria to the impact of local environments upon subsidiaries' operations, requires the construction of a model which can link the nature of the elements of the evaluation process to the presumed capability of the formal evaluation criteria to take account of relevant environmental influences. Such a model was created in a way that the major characteristics of the formal performance evaluation criteria (i.e. items in the internal reporting system, performance measures and standards) operated in a company are aggregated into a sole measure.

Exhibit 12.I describes in a detailed manner how this model is constructed, as well as the assumptions behind it. Basically, the model consists of six components, each representing a major characteristic of the foreign subsidiary evaluation process in operation in a company, as described in section 12.2. Four of these components are related to specific features of the performance evaluation criteria applied in each company to the typical foreign subsidiary⁽¹⁾: 1) preference for non-financial vs financial information included in the internal reporting system; 2) preference for non-profit-based vs profit-based financial measures of performance; 3) importance attributed to the internal reporting system used as a global package of information on subsidiaries vs a battery of individual performance measures of financial nature used independently of the internal reporting system; and 4) number of

**Exhibit 12.I - Model to Determine the Degree of Sensitivity of
Formal Performance Evaluation Criteria to Foreign
Environmental Influences**

**COMPONENT 1 - Preference for Non-Financial vs Financial
Information**

Description: This component of the model compares the usefulness attributed by HQ executives to non-financial information with that attributed to financial information, included in the internal reporting system, when controlling and evaluating foreign subsidiaries' operating performance.

Formula: For each case, compute

$$C1 = \frac{\text{Mean of EINV, EMARKT to EPLSCOND, EEMPLOY (Non-Financial Items)}}{\text{Mean of EBS to ECF, ESALES, EBORROW, EKEXP (Financial Items)}}$$

Characteristics: Maximum 1.680	Mean 0.750
Minimum 0.304	Standard deviation 0.194

Assumption: It is assumed that the higher the importance attributed in a company to non-financial information (e.g. market shares, labour relations, reports on economic, political, legal, and social conditions in host countries) reported by subsidiaries in the internal reporting system, relatively to financial information (e.g. balance-sheet, P & L account, cash flow), the more sensitive to environmental influences the formal performance evaluation process is likely to be.

Note: Means were employed in C1 instead of medians, for reasons of convenience of computation.

**COMPONENT 2 - Preference for Non-Profit-Based vs Profit-Based
Financial Measures of Performance**

Description: This component of the model compares the preference given by HQ executives to financial measures that are not based on profit (e.g. cash flow, sales ratios, costs, orders, debtors, remittances), with that given to financial measures based on profit (e.g. ROI, total income, return on sales, RI), when controlling and evaluating foreign subsidiaries' operating performance.

Exhibit 12.I (continued)

Formula: For each case, compute

$$C2 = \frac{\text{Number of Non-Profit-Based Financial Measures Used (count ICF to INPMOTH)}}{\text{Number of Profit-Based Measures Used (count IROI to IPMOTH)}}$$

Characteristics: Maximum 3.0 Mean 0.527
Minimum 0.0 Standard deviation 0.467

Assumption: It is assumed that the higher the preference given in a company to non-profit-based financial measures, relatively to profit-based measures, the more sensitive to environmental influences the formal performance evaluation process is likely to be.

COMPONENT 3 - Importance of the Internal Reporting System Taken as a Global Package of Information vs a Battery of Individual Performance Measures

Description: This component of the model relates the importance attributed by HQ executives to two major instruments of foreign subsidiary assessment, namely the internal reporting system used as a global package of information on subsidiaries' operations (variable PACKAGE) and a battery of performance measures of financial nature used independently of the internal reporting system (variable PURMEAS). The formula used in this component reflects not only the comparative importance given to the two variables in question, but also the degree of importance attributed to one of them (PACKAGE) in isolation.

Formula: For each case, compute

$$C3 = \text{PACKAGE} \times 2 - \text{PURMEAS}$$

Characteristics: Maximum 8.0 Mean 4.920
Minimum 1.0 Standard deviation 1.594

Assumption: It is assumed that the more the control and evaluation of foreign subsidiaries' operations relies upon the package of information included in the internal reporting system, and less upon a battery of individual financial measures of performance isolated from that package of information, the more sensitive to environmental influences the formal evaluation process is likely to be.

COMPONENT 4 - Number of Performance Standards Used

Description: This component of the model determines how many standards of performance for each subsidiary are used in a company to evaluate foreign subsidiary operating performance.

Formula: For each case, compute

C4 = Number of Standards Used (count TARGET to STBUK)

Characteristics:	Maximum	6.0	Mean	4.437
	Minimum	1.0	Standard deviation	1.597

Assumption: It is assumed that the more performance standards are used in a company to assess each subsidiary's operating performance, the more sensitive to environmental influences the formal evaluation process is likely to be.

COMPONENT 5 - Extent of Variability of Performance Targets Among Subsidiaries

Description: This component of the model determines the extent to which subsidiary performance targets vary both in nature and in value across a company's set of foreign operations. The formula used computes a weighted average, where the variation in the nature of targets (variable TARGVARN) is given a higher weight than the variation in the value of targets (variable TARGVARN).

Formula: For each case, compute

$$C5 = \frac{TARGVARN \times 2 + TARGVARN}{3}$$

Characteristics:	Maximum	5.0	Mean	2.337
	Minimum	1.0	Standard deviation	0.939

Assumption: It is assumed that the higher the variation in the nature and in the value of performance targets across foreign operations in a company, the more tailored to each subsidiary the performance targets are, and, consequently, the more sensitive to environmental influences the formal evaluation process is likely to be.

COMPONENT 6 - Variability of Formal Performance Evaluation Criteria Among Subsidiaries

Description: This component of the model reflects the level in which formal criteria (i.e. items in the internal reporting system, performance measures and standards) used to control and evaluate subsidiary operating performance vary across a company's set of foreign operations.

Formula: For each case, determine

C6 = Variability of Formal Performance Evaluation Criteria (variable SAME)

Characteristics: Maximum 3 (Cos. use completely different formal criteria across foreign subsidiaries)
Minimum 1 (Cos. use exactly the same formal criteria across foreign subsidiaries)

Assumption: It is assumed that the more the formal performance evaluation criteria vary across foreign subsidiaries in a company, the more tailored to each subsidiary the evaluation criteria are, and, consequently, the more sensitive to environmental influences the formal evaluation process is likely to be.

SYNTHESIS: Variable to Measure the Degree of Sensitivity of the Formal Performance Evaluation Criteria to Foreign Environmental Influences

Description: The model culminates with the construction of a variable that is expected to give an indication of the degree of sensitivity of the formal performance evaluation criteria operated in a company (i.e. items in the internal reporting system, performance measures and standards) to the influences exerted by foreign environments upon subsidiaries' operations. This variable results from the aggregation of the variables created in components 1 to 6 above. In order that each component gives a contribution with a similar weight to the final measure, the results of C1 to C6 were transformed in a way that they all range from approximately 1 (or zero) to 10. For details of this transformation see Appendix E.

Formula: For each case, compute

CRIT = C1 + C2 + C3 + C4 + C5 + C6

Characteristics: Maximum 43.875 Mean 32.005
Minimum 19.048 Standard deviation 5.523

performance standards used. The remaining two components of the model are related to the degree of variability of targets, in particular, and of evaluation criteria, in general, across a company's set of foreign operations. The six components are aggregated into a variable (CRIT) whose scores are assumed to give an indication of the degree of sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations. Appendix E presents the computer programme that was used to create variable CRIT.

The tests of independence conducted between this new variable and the variables used to measure companies' characteristics were based on the familiar chi-square and on a statistic employed in the study for the first time: the Spearman rank correlation coefficient (r_s), sometimes also called Spearman's rho.

The variable created for purposes of this test (variable CRIT) is measured at the ordinal-level. Its distinctive characteristic lies in that it has a very large number of categories. As seen in Exhibit 12.I, variable CRIT ranges from a minimum of 19.048 to a maximum of 43.875. Among the 73 valid cases, only 2 have the same value, what makes CRIT a variable with 72 different categories.

The Spearman rank correlation coefficient seems to be an appropriate statistic to measure the association between CRIT and companies' characteristics. This statistic requires both variables at the ordinal-level of measurement (or higher), and a large number of categories or ranks on each of the variables [Nie et al., 1975, p.227]. Its power-efficiency is high, reaching 91 percent of the efficiency attained with the most powerful parametric correlation, the Pearson r [Siegel, 1956, p.213]. Due to the imposition of a large number of categories on each of the variables being tested, Spearman's rho was used only in the tests of independence between CRIT and those explanatory variables which satisfy this requirement⁽³⁾ (i.e. variables SIZSALE, SIZASSET, SALEOUT, ASSETOUT, and NCOUNTRY, all of which are ratio-level variables with many categories). Tests of independence between CRIT and the other explanatory variables (nominal-level, or ordinal-level or higher with few categories) were

based on the chi-square statistic.

Table 12.XIX presents the outcome of the tests conducted in relation with the null hypothesis defined above. Results show that the degree of sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations, is associated with three major company characteristics: the commitment of a company to foreign operations, the level of internationalization of a company, and the degree of a company's exposure to host country and government influence in its foreign operations.

The first of these characteristics - the commitment of a company to foreign operations - is measured in the study in terms of proportion of sales achieved in foreign markets to group consolidated sales revenue, and also in terms of proportion of total assets located outside the U.K. to total company assets. The results produced statistically significant relationships, at the 5 percent level, between variable CRIT and both these variables (Table 12.XIX). The relationship has proved to be direct, since the correlation coefficients are positive. This indicates that the higher the commitment of a company to foreign activities (i.e. the more a company depends on overseas sales, and the more it has invested abroad), the more the formal performance evaluation criteria used to assess foreign subsidiaries' operations are capable of taking account of relevant environmental differences that differ from one geographic area to another.

The second company characteristic associated with CRIT - the level of a firm's internationalization - is also measured in the study in terms of two criteria: total number of countries, and number of geographic areas in the world where a company maintains control over industrial operations. The tests of association produced a statistically significant result only for the variable that measures internationalization of a company in terms of number of countries operated. The significance, at the 1 percent level, is very high, and the positive correlation indicates that the variables are directly associated. It can be concluded, therefore, that the greater the

Table 12.XIX - Tests of Independence Between the Sensitivity to the Environment of Performance Evaluation Criteria and Major Corporate Characteristics, Using Spearman's Rho and Chi-Square

VARIABLE NAME	VARIABLE STAT.	Type of Industry		Company Size		Commitment to Foreign Operations		Internationalization		International Experience		Organizational Structure		Exposure to Host Country Influence		Corporate Strategy	
		INDUSTRY	SIZE	SALE	ASSET	SALEOUT	ASSETOUT	N COUNTRY	N AREA	FIRSTOUT	STRUCT	EXPOSURE	CONTROL	by HQ	Influence	Corporate Strategy	
CRIT																	
r_s		0.130	0.143	0.243	0.228	0.280											
p		(0.137)	(0.114)	(0.022)	(0.033)	(0.009)											
N		73	73	69	66	72											
χ^2		3.47							2.985 (a)	2.07	4.64	5.99	0.54			1.08 (a)	
p		(0.482)							(0.084)	(0.724)	(0.326)	(0.050)	(0.970)			(0.299)	
d.f.		4							1	4	4	2	4			1	
N		73							72	69	73	71	72			68	

NOTES: ** significant $p < 0.01$ * significant $0.01 < p \leq 0.05$ Significance levels for r_s are one-tailed probabilities.
 Key to acronyms and symbols:
 CRIT = Sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations.
 r_s = Spearman rank correlation coefficient (or Spearman's rho)

χ^2 = chi-square statistic
 p = level of significance
 d.f. = degrees of freedom
 N = number of valid cases
 (a) Chi-square subject to Yate's correction for continuity.

number of countries where a company owns industrial facilities, the more sensitive to foreign environmental influences the formal performance evaluation criteria used in the company are likely to be.

The third company feature associated with CRIT, measures the level of exposure of a corporation to host country and government influence. Chi-square used to test the level of association between these two variables, produced a level of significance of 5 percent (Table 12.XIX). The strength of the association in the sample is reasonable, with a Cramer's V of 0.290, and an uncertainty coefficient (asymmetric) of 0.066. An analysis of the crosstabulation between the two variables reveals that they are directly associated⁽⁴⁾. The conclusion, therefore, is that the higher the exposure of a company to host country and government influence in its international activity, the more likely are the formal performance evaluation criteria employed in the company to reflect relevant environmental influences exerted upon foreign subsidiaries' operations.

Tests of independence between CRIT and the other explanatory variables included in the null hypothesis did not produce statistically significant results (Table 12.XIX). For this reason, association between such variables cannot be accepted.

Summary: The aim of test 2 was to determine which company characteristics, if any, are related to the capability of formal performance evaluation criteria to take account of relevant environmental influences on subsidiaries' operations. Determining such capability required the construction of a variable which measures the degree of sensitivity of evaluation criteria to the impact of local environmental factors upon subsidiaries' activities. Such a variable was based on a model linking the nature of major elements of the evaluation process to the assumed ability of the formal assessment criteria to recognize relevant environmental influences specific to operations. The statistical tests conducted revealed the association between the degree of sensitivity of formal performance evaluation criteria to foreign environments, and three company characteristics: commitment to foreign operations, internationalization, and exposure to host country and government

influence. The positive association obtained for all three relationships indicates that the higher the commitment of a company to foreign operations (i.e. the higher the percentage of sales and assets abroad to total group sales and assets), the higher the level of internationalization of a company (i.e. the greater the number of countries where a company owns industrial facilities), and the higher the degree of exposure of a company to local host country and government influence, the more sensitive to the environmental impact on each operation the formal performance evaluation criteria used in the company are likely to be.

Test 3

Following the discussion in chapter 7 (section 7.4.), the aim of this test is to determine whether the degree of sensitivity of formal performance evaluation criteria to foreign environmental influences is associated with the way in which the environmental assessment activity is organized in companies' headquarters. The level of sensitivity of evaluation criteria to environmental influences has been defined in the previous test (Test 2). There, a variable was created (variable CRIT) which measures the capacity of formal performance evaluation criteria to take account of relevant environmental influences that differ from one geographic area to another. As regards the way in which the environmental assessment activity is organized in companies' headquarters, chapter 10 reported the existence of three major groups of companies (variable ENFCN): one includes those firms where foreign environmental information is processed as part of a formal function institutionalized in headquarters; such firms have one or more managers with formal responsibility for collecting and analysing foreign environmental information. The second group includes those companies in whose headquarters foreign environmental information is collected and analysed only on an informal basis; although in such companies information on local environments is usually collected and analysed, no one in headquarters has been given formal responsibility for this. The third group includes those corporations where foreign environmental information is not regularly collected or analysed, either formally or informally.

The test anticipates that companies which have formally set up in headquarters the environmental assessment function will tend to employ formal performance evaluation criteria that are more sensitive to the impact exerted by local environments upon foreign subsidiaries' activities.

The null hypothesis states that:

H₀₃ : there is no association between the degree of sensitivity of a company's formal performance evaluation criteria to the impact of local environments upon foreign subsidiaries, and the way in which environmental assessment activity is organized in the company's headquarters.

Chi-square was used to test this association. Both variables are measured at the ordinal-level, however, Spearman's rho could not be employed here, since the variable which was correlated against CRIT, has a very small number of classes.

The results show a statistically significant association between the two variables under test (Table 12.XX). The level of significance in the population is very high, amounting to 0.34 percent, and the two variables are related in the sample in a fairly strong manner (e.g. Cramer's V of 0.40). The direction of the association tells that companies where the environmental assessment function was institutionalized tend to operate performance evaluation criteria which take widely into account relevant environmental influences. In contrast, companies with no environmental assessment activity (either formally or informally) in headquarters tend to control and evaluate the performance of their foreign subsidiaries using formal assessment criteria that take very little into account influences exerted by local environments over subsidiaries' activities.

Summary: Test 3 attempted to discover a relationship between the degree of sensitivity to foreign environmental influences on the part of formal criteria used in the evaluation and control of overseas subsidiaries, and the way in which the environmental assessment activity is organized in companies' headquarters. Results have shown

Table 12.XX - Chi-Square Test of Independence Between the Sensitivity to the Environment of Performance Evaluation Criteria and the Way in Which the Environmental Assessment Activity is Organized in HQ

		ENFCN - Organization of the environmental assessment activity in a company's headquarters
Sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations (CRIT)	χ^2	11.39
	p	(0.0034)
		**
	d.f.	2
	N	71
	Cramer's V	0.401
	Unc. coeff.	0.122

NOTES: ** significant
Key to symbols:

$p \leq 0.01$

χ^2

= chi-square statistic

p

= level of significance

d.f.

= degree of freedom

N

= number of valid cases

Unc. Coeff. =

uncertainty coefficient (asymmetric) with CRIT dependent

that companies with formal environmental assessment functions, and to a lesser extent, companies where environmental information is collected and analysed on an informal basis, tend to use formal performance evaluation criteria that are significantly more sensitive to local environmental influences, than those used by companies with no environmental assessment activity at all.

Test 4

Test 4 is intended to compare for each company the degree of sensitivity of formal performance evaluation criteria to foreign environmental influences, and the opinion of headquarters executives as to the effectiveness of such evaluation criteria in taking account of environmental influences. Earlier (Test 2, in the present section), a variable was defined (variable CRIT) which was accepted as a measurement of the capability of a performance evaluation system to take into account relevant environmental factors that influence the activities of subsidiaries operating abroad. This variable provided the study with an independent means of assessing the effectiveness of a company's performance evaluation system in recognizing environmental influences.

The judgement of headquarters executives involved in performance evaluation as regards such effectiveness of the evaluation criteria was sought in the questionnaire, and the results were reported in section 12.3. above.

This test attempts to determine how judgements of headquarters executives compare with the sensitivity to the environment as measured by variable CRIT. It is hypothesized that performance evaluation criteria used for subsidiaries and for managers⁽⁵⁾ that are more sensitive to the impact exerted by local environments upon foreign subsidiaries' activities, will tend to be regarded by executives as more effective in taking account of significant foreign environmental influences.

The null hypothesis states that:

H₀₄ : there is no association between the degree of sensitivity of a company's formal performance evaluation criteria to the impact of local environments upon foreign subsidiaries, and the level of effectiveness, in headquarters executives' opinion, of the formal assessment criteria in taking such environmental impact into account.

The null hypothesis has been tested for two relationships. One, relates variable CRIT with executives' judgements on the capability of the evaluation criteria to take into account relevant environmental influences when controlling and evaluating subsidiaries' activities (this measured by variable AEFFSUB). The other relationship tested, associates variable CRIT with executives' judgements on the same capability of the evaluation criteria, when assessing subsidiary managers⁽⁵⁾ (measured by variable AEFFMAN).

Chi-square was the statistical technique chosen here, for reasons similar to those given in Test 3. Results reported in Table 12.XXI reveal that CRIT is statistically associated at a significant level (less than 5 percent) with both the variables that measure executives' opinions on the evaluation criteria used in the assessment of the performance of subsidiaries and of managers.

The direction of the two relationships has proved to be as predicted: formal performance evaluation criteria that are more sensitive to environmental influences tend to be perceived as more effective in taking account of such influences, both when they are used to control and evaluate subsidiaries' activities and when they are employed to assess subsidiary managers. The inverse also holds: evaluation criteria whose scores from variable CRIT indicate low levels of sensitivity to local environments, tend to be perceived as little effective, both in the control and evaluation of subsidiaries and in the assessment of managers. This indicates that the headquarters executives can make a fair judgement on the environmental capability of the systems they use, since their opinions are associated with the intrinsic sensitivity to the environment of the evaluation criteria, as independently ascertained in the study.

Table 12.XXI - Chi-Square Tests of Independence Between the Sensitivity to the Environment of Performance Evaluation Criteria and HQ Executives' Opinion About the Effectiveness of the Criteria to Take Account of the Environment

		AEFFSUB	AEFFMAN
Sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations (CRIT)	χ^2	5.42	4.09
	p	(0.020)	(0.043)
		*	*
	d.f.	1	1
	N	72	47
	Phi	0.313	0.359
	Unc.Coeff.	0.083	0.129

NOTES: * significant $0.01 < p \leq 0.05$
Key to symbols: χ^2 = chi-square statistic subject to Yate's correction for continuity
 p = level of significance
 d.f. = degrees of freedom
 N = number of valid cases
 Unc.Coeff. = uncertainty coefficient (asymmetric) with CRIT dependent

Key to acronyms: AEFFSUB = HQ executives' opinion as to the actual capability of formal assessment criteria to take account of relevant foreign environmental factors in the control and evaluation of subsidiary operations.

 AEFFMAN = HQ executives' opinion as to the actual capability of formal assessment criteria to take account of relevant foreign environmental factors in the assessment of subsidiary managers.

Summary: The aim of Test 4 was to compare the degree of sensitivity of formal performance evaluation criteria to foreign environmental influences, and the perception of headquarters executives as regards the effectiveness of the evaluation criteria in taking into account such influences from the environments. Results demonstrate that high levels of sensitivity to the environment as estimated by the independent measure created in the study, are statistically associated with high ratings of effectiveness from the headquarters executives who are involved in the evaluation process of subsidiaries and their managers. In other words, in companies which operate performance evaluation criteria that are highly sensitive to the environment headquarters managers tend to regard the criteria as highly effective in recognizing relevant environmental influences, both when evaluating subsidiaries' operations, and when assessing subsidiaries' managers. The inverse applies for companies with evaluation criteria that are little sensitive to the environment. Such an association suggests that managers' perception of the effectiveness of the performance evaluation criteria coincide with the real environmental capabilities of the criteria, as measured in the study using an independent method.

Test 5

This test attempts to explore whether the perceptions of headquarters managers involved in the performance evaluation process regarding the extent of variability in the characteristics of the foreign host environments are associated with the same managers' views of the extent to which formal assessment criteria should ideally be able to take account of relevant foreign environmental factors. The testing of such a relationship was suggested in chapter 7 (section 7.4.), as a preliminary stage in the process to determine whether the environmental attributes of evaluation systems are in agreement with the requirements of their users as far as environmental recognition is concerned. Here, it is expected to confirm that the way in which the environment is perceived by headquarters executives to differ across foreign subsidiaries is associated with the executives' requirements of the extent to which the environment should be taken into account by

the performance evaluation systems. Next, in Test 6, the perception of executives as to the variability of the environments will be tested against the intrinsic environmental capabilities of the systems actually in operation.

The determination of the extent of variability of foreign environmental influences across different host locations, according to headquarters executives' perceptions, required the creation of a new variable which reflects for each company how differently environmental factors listed in the questionnaire were ranked for the several geographic areas where the company operates.

Major influences exerted by local environments on companies' subsidiaries operating abroad were analysed earlier in the chapter (section 12.3.). There, the most influential environmental factors for each geographic area in the world were identified, using a comprehensive list of factors which respondents ranked by order of importance. It was concluded that, on an aggregate basis, headquarters managers tend to perceive the environment where subsidiaries operate as different from one another. However, if each company is taken separately, the respective headquarters executives' perceptions on the variability of foreign environments are likely to vary substantially. Such variation may be due not only to the different intrinsic individual perceptions of headquarters executives, but also to the different nature of countries and geographic regions where their companies operate. For example, an executive of a MNC which operates only in Europe and North America is likely to perceive less variability in the foreign environments than the executive of another MNC which operates in Europe and Africa, or in Europe and the Middle East.

The Kendall coefficient of concordance (W) was considered to be an ideal measure for the perception of variability of foreign environments in each company. Kendall's W is a non-parametric measure of correlation which indicates the relation among several rankings of N objects [Siegel, 1956, pp.229-238]. It expresses the degree of concordance among k variables measured in ranks. Considering two opposite and extreme situations, one where there is no agreement among

the several sets of rankings, and the other where there is perfect agreement among these several sets, the Kendall coefficient of concordance provides an "index of the divergence of the actual agreement shown in the data from the maximum possible (perfect) agreement [Siegel, 1956, p.230].

The computation of Kendal's W for each case in the study⁽⁶⁾ required letting N ("the number of entities to be ranked"), and k ("the number of judges assigned ranks") to be respectively the seventeen environmental factors provided in a list in the questionnaire, and the seven geographic areas for which the environmental factors were ranked. The values of W computed for each case in the sample range from 0.653 to 0.073, with a mean of 0.314. A high value of W, which reflects a high level of concordance in the rankings attributed to each environmental factor for every geographic region operated by a company, may be interpreted as meaning that headquarters executives view the influences of environmental factors on subsidiaries' operations as similar from one geographic area to another. In contrast, a low value of W indicates a substantial level of discordance in rankings, which means that headquarters executives view environmental influences on subsidiaries' operations as fundamentally different across geographic regions.

As to the views of executives regarding the desired capability of foreign performance evaluation criteria to take into account relevant environmental influences that vary from one geographic area to another, they were obtained in the questionnaire for situations involving both the evaluation of subsidiaries, and the assessment of managers. Detailed results describing such views were presented earlier in the chapter (section 12.3.).

It is anticipated that managers who perceive the influences of local environments on subsidiaries' activities as varying substantially from one geographic area to another will tend simultaneously to think that formal performance evaluation criteria used for subsidiaries and for managers should be able to take extensive account of significant foreign environmental factors.

In its null hypothesis, the test states that:

H₀₅ : there is no association between how a headquarters executive perceives the extent of variability of foreign environmental influences across the geographic areas where his company operates, and how he views the extent to which formal performance evaluation criteria should be able to take into account relevant foreign environmental influences.

The null hypothesis was tested for two relationships. One, relates variable W with executives' preferences regarding the capability of formal assessment criteria to take account of environmental influences on subsidiaries when controlling the units (variable DEFFSUB). The other relationship tested, associates variable W with executives' preferences regarding the same capability of the evaluation criteria when assessing the units' managers (variable DEFFMAN).

Since the variables which are to be correlated against W have a small number of categories, chi-square was selected as the appropriate technique.

Table 12.XXII shows that variable W is associated at a statistically significant level (less than 5 percent) with the variables used to measure managers' preferences regarding the capability of the assessment criteria to recognize relevant environmental factors both when evaluating operations and managers. The direction of the two relationships is such that high scores in the variables which measure such preferences tend to be related with low scores in variable W. In other words, managers who perceive higher variability in the influences exerted by foreign environments upon their companies' subsidiaries operating in different geographic areas tend to believe that formal assessment criteria should to a greater extent be able to take account of relevant foreign environmental influences in the evaluation of subsidiaries and in the assessment of managers. In contrast, managers who view the influences of environmental factors on subsidiaries' operations as similar from one geographic area to another tend to think that assessment criteria should not at all, or

Table 12.XXII - Chi-Square Tests of Independence Between the Perceptions of HQ Executives on the Extent of Environmental Variability and Their Opinion on the Extent to Which Performance Evaluation Criteria Should Take Account of the Environment

		DEFFSUB	DEFFMAN
Extent of variability in the foreign environments perceived by HQ executives involved in a company in the evaluation and control of overseas subsidiaries (W)			
χ^2		4.92(a)	7.91
p		(0.027)	(0.019)
		*	*
d.f.		1	2
N		71	65
Phi		0.292	-
Cramer's V		-	0.349
Unc.Coeff.		0.064	0.058

NOTES: * significant 0.01 < p ≤ 0.05

(a) Chi-square subject to Yate's correction for continuity

Key to symbols: χ^2 = chi-square statistic subject to Yate's correction for continuity
p = level of significance
d.f. = degrees of freedom
N = number of valid cases
Unc.Coeff. = uncertainty coefficient (asymmetric) with CRIT dependent

Key to acronyms: DEFFSUB = HQ executives' opinion as to the desired capability of formal assessment criteria to take account of relevant foreign environmental factors in the control and evaluation of subsidiary operations.

DEFFMAN = HQ executives' opinion as to the desired capability of formal assessment criteria to take account of relevant foreign environmental factors in the assessment of subsidiary managers.

should only to a limited extent, recognize foreign environmental factors when evaluating subsidiaries or managers.

Summary: Test 5 finds its justification in chapter 7 where the main hypotheses of the study were formulated. The test attempts to demonstrate a certain relationship which should precede the exploration of an important association in Test 6. The present test confirmed that the way in which the environment is seen to differ among host nations is related to the requirements of the extent to which the environment should be taken into account by performance evaluation systems. Results show that headquarters executives involved in foreign subsidiary performance evaluation and control who perceive the influence of the environment on operations as varying substantially across the geographic areas where companies are established tend to express the desire of their companies' evaluation criteria to take, ideally, extensive account of foreign environmental factors. The opposite applies for managers who do not perceive the environmental influences on subsidiaries to differ across host locations.

Test 6

After establishing in Test 5 that managers' perceptions of environmental variability are associated with their views of the extent to which formal assessment criteria should ideally be able to take the environment into account, Test 6 will now attempt to determine whether there is a relationship between the perceptions of environmental variability and the intrinsic sensitivity to local environmental influences of formal performance evaluation criteria used in companies' headquarters. It is hypothesized that there is a direct association between these two factors (see chapter 7). Hence, it is expected that companies whose headquarters executives perceive high levels of variation in the characteristics of the environments will tend to have formal performance evaluation criteria that are widely sensitive to local environmental influences. This, complemented with the findings of Test 5, will suggest that the extent to which formal criteria of subsidiary performance evaluation and

control are actually capable of recognizing environmental influences responds to the requirements of the managers who are responsible for the evaluation process.

In its directional form, the null hypothesis states that:

H₀₆ : there is either no association or a negative association between headquarters executives' opinion as to the extent of variability of foreign environmental influences across the geographic areas where a company operates, and the level of sensitivity of the company's formal performance evaluation criteria to the impact of local environments upon foreign subsidiaries.

The perceptions of the variability in the characteristics of foreign environments by headquarters executives are measured by a variable (variable W) created in the previous test which quantifies the extent to which respondents perceive foreign environmental influences varying across different geographic areas.

The test of association conducted between variable W and the variable used to measure the level of sensitivity to local environmental influences of formal performance evaluation criteria (i.e. variable CRIT, created in Test 2 earlier in this section), was based on the Spearman rank correlation coefficient (r_s). As seen above (Test 2 in the present section), Spearman's rho should only be applied to cases where both variables are at least at the ordinal-level, and both having a large number of categories. This criterion is met for the two variables under analysis here (variable W has 63 different categories for 72 valid cases).

Table 12.XXIII presents the result of the test of association conducted. The level of significance obtained, above the cut-off level of 5 percent, does not demonstrate an association between the perception of variability of foreign environments from headquarters executives and the sensitivity to foreign environments of the formal performance evaluation criteria used by these executives. Note, however, that Spearman's rho is negative, which means that, as

Table 12.XXIII - Spearman's Rho Test of Independence Between the Perceptions of HQ Executives on the Extent of Environmental Variability and the Sensitivity to the Environment of the Performance Evaluation Criteria Employed

		CRIT - Sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations
Extent of variability in the foreign environments perceived by HQ executives involved in the evaluation and control of overseas subsidiaries (W)	r_s	-0.103
	p	(0.230)
	N	54

NOTES: Significance level of r_s is a one-tailed probability
Key to symbols: r_s = Spearman rank correlation coefficient (or Spearman's rho)
 p = level of significance
 N = number of valid cases

expected, low values of W (i.e. perceptions of high variability in foreign environments) tend to be related to high values of CRIT (i.e. performance evaluation criteria taking extensive account of foreign environmental influences on subsidiaries).

Due to the inconclusive nature of the result, it is not possible to say that the requirements of headquarters executives as to environmental recognition in the subsidiary performance evaluation process finds a correspondence in the attributes of the evaluation systems. It may, therefore, be suggested that perhaps the level of environmental sensitivity of the performance evaluation systems in operation does not adequately satisfy their users' needs.

Summary: Test 6 sought to determine whether the perception of variability of foreign environments was associated with the capability of the formal performance evaluation criteria actually used in companies to take into account relevant environmental differences that differ from one geographic area to another. This test, which should be seen in conjunction with Test 5, represented an attempt to find out how the environmental attributes of the evaluation systems in operation in companies correspond to the requirements of their users. The results of the test did not reveal a statistically significant relationship between the two variables under scrutiny. This suggests the possibility that the extent to which performance evaluation systems are actually capable of taking environmental influences into account is not adequately responding to the needs of the people involved in the evaluation process.

12.5 Summary and Conclusions

Chapter 12 investigated how headquarters executives in MNCs control and evaluate the operating performance of overseas subsidiaries. The chapter dealt with assessment practices that result from the use of information reported by operations through formal channels of

communication set up between subsidiaries and headquarters. Although the main focus of attention was the assessment of foreign subsidiaries' operations, in addition the chapter also explored the assessment practices used for the managers responsible for those subsidiaries.

The analysis started by describing, in the opinion of those who in headquarters are involved in performance assessment, how useful items included in the internal reporting system are for controlling and evaluating foreign subsidiaries' operating performance. Generally, items of a financial nature such as profit and loss, cash flow, updates of profit forecasts, and borrowings are all considered highly useful by the overwhelming majority of respondents. On the other hand, items of a non-financial nature like production output, market shares, labour relations, and reports on local economic and non-economic environmental conditions, are regarded as highly useful only by a minority of respondents. This reflects a preference in general for financial items of information, which is perhaps deceptive in the sense that it may conceal the fact that non-financial information plays an important role in performance evaluation as a supplier of information that supplements financial data. Many of the studies reviewed in chapter 6 concentrated solely on assessment criteria of a financial nature, and doing so they overlooked a vital component in the subsidiary performance evaluation and control process.

In order to find how adequate is the match between the reporting frequency of items included in companies' internal system and the information requirements of their users, a test was conducted which shows that the level of usefulness attributed to items in reporting systems tend to be directly associated with the frequency with which such items are reported by subsidiaries (Test 1). This means that items perceived as more useful in evaluating subsidiaries' performance tend to be requested more frequently from subsidiaries. Also, companies where certain items are regarded of little usefulness tend to request these items very infrequently. This association appears to indicate that the frequency with which individual items are reported meets the information needs of users. Earlier (chapter 11), it was found that despite the fact that items of a non-financial nature were

amply included in companies' internal reporting systems, many of these companies require such items from subsidiaries only occasionally or very seldom (e.g. once a year). This is in particular, the case of reports on political, legal and social conditions in host countries. Only a relatively small number of corporations have non-financial items reported regularly on a frequent basis (e.g. monthly). It can be concluded, therefore, that the minority of companies that regard non-financial items as highly useful tend to be those relatively few where the reporting of non-financial items is requested from subsidiaries on a highly frequent basis.

Along with the information provided in the internal reporting system, managers in headquarters also employ performance indicators or measures. These, many of them ratios, are either calculated in headquarters from raw-data included in the internal reporting system or directly forwarded by subsidiaries. The financial indicators most commonly found in practice are described in the chapter, together with the relative importance attributed by managers to each indicator for subsidiary evaluation. Return on investment and total income (either absolute or compared to budget) fare among the most popular and highly regarded profit-based measures of performance. Cash flows, orders, and sales ratios are included among the most frequently used and highly ranked non-profit-based financial indicators. These results are similar to those obtained in the surveys of U.S. multinationals (chapter 6), insofar as operating budget comparisons, ROI, profit and cash flows were there also considered the favourite assessment techniques. Of particular interest is the reduced use and modest ranking of measures so frequently mentioned in the literature, such as RI and return on equity. As regards RI, if a direct comparison between this and other studies was allowed, it would be noted that despite its reduced use amongst U.K. multinationals, RI was, however, employed more frequently in Britain than in North America. In effect, all studies surveyed in chapter 6 were unanimous in attributing to the RI method, the very lowest incidence of use. Such a wider diffusion of this measure in U.K. than in U.S. MNCs would confirm a simple finding reached by Scapens and Sale [1981] for domestic firms operating in both sides of the Atlantic.

When asked to compare the importance for foreign subsidiary evaluation and control of the internal reporting system used as a global package of information, and of a battery of performance measures used independently of the reporting system, headquarters managers demonstrated a very clear preference for the former. In other words, when the usefulness of these two instruments of analysis are compared, the monitoring of the information package submitted in the internal reporting system is considered more important for the evaluation and control of subsidiary operating performance than the strict monitoring of a battery of individual profit- and non-profit-based measures. This finding calls attention to a very important component of the subsidiary evaluation process - the internal reporting system - which was ignored by most empirical surveys (chapter 6) when reviewing the major criteria of performance assessment.

Having determined the type and nature of the information used by managers in headquarters, the study then turned to the yardsticks or standards against which actual results achieved by subsidiaries are compared. This is a major element of the formal evaluation process, which was studied in the chapter in considerable detail. Among the several different standards of performance that are found in practice, two of them are encountered in nearly every company: targets previously set for subsidiaries, and the past actual results of subsidiaries (i.e. standards based on trends from historical data). The way performance targets are determined was found to be usually linked to the budget. In almost every company, performance targets are calculated either on the basis of the subsidiary budget alone, or on the basis of the subsidiary budget adapted to the company's overall objectives. Such a predominance of the budget as a basis for the setting of targets, together with the generalized use of past subsidiary results were also encountered in the American studies reviewed in chapter 6.

The preparation and approval of performance targets to be set for operations may tend either to be centralized in headquarters or to be left to subsidiaries' decision. In only a reduced minority of cases, is the process of selecting and assigning performance targets to subsidiaries centralized. The high levels of participation of local

management in the setting of subsidiary targets suggests that, in principle, the specificity of each subsidiary should be reflected to some extent in the targets assigned. This is based on the assumption that subsidiary managers have a better understanding of the particular conditions faced by their subsidiaries than headquarters executives. Besides, local managers have normally a vested interest in the results produced by their operations, and naturally they will try to safeguard the specificity of each subsidiary when negotiating the setting of targets.

Targets assigned to foreign subsidiaries are likely to vary from operation to operation according to the different nature of the subsidiaries' businesses, and to the varying local economic and non-economic conditions. Variation in targets may occur simply in value, or, more extensively, in nature. It is assumed that a variation in nature offers a better method of accounting for the differences among subsidiaries than a simple variation in value.

Variation in the value of targets across a company's foreign operations was found to be much more extensive than variation in the nature of targets. Only a handful of companies employ targets that vary widely in nature among subsidiaries. This indicates that most companies although making some effort to adapt targets to the particular conditions faced by subsidiaries are not employing more sophisticated techniques of target setting that would achieve a better reflection of each subsidiary specificity. Targets are not the only component of the evaluation process likely to differ in a company from subsidiary to subsidiary. The whole performance evaluation criteria, which involve the use of items in the internal reporting system, as well as the use of performance measures and standards, are likely to be adapted to the specificity of each foreign operation. Results show that nearly two thirds of all companies attempt to adjust the formal assessment criteria to special circumstances associated with subsidiaries. However, only a very small minority employ completely different criteria across foreign operations. Most firms tend to use similar criteria only varying relative weights according to the specific nature of each subsidiary. It appears, therefore, that the conclusions made above about the extent of the adaptability of subunit

targets to the specificity of subsidiaries also apply here in this broader context. In effect, most companies adopt only to a reduced degree their formal evaluation criteria to the particular nature and conditions of foreign operations. Here, again, more elaborate techniques do not appear to be generally used.

A number of factors were found to have determined the use of different assessment practices for foreign subsidiaries of a same company. The most influential factor considered by headquarters executives is the differing nature of the host environments. Also considered of substantial importance are factors such as unsatisfactory performance level of subsidiaries, strategic importance of subsidiaries for the overall strategy of a company, and geographic location of subsidiaries.

It is generally recognized that MNCs which have their operations scattered over a number of countries are likely to have their operations subject to different influences posed by the varying host environments. As it was just mentioned, companies cope differently with such a variability, employing methods of evaluation and control whose sophistication ranges widely. A major objective of this study is to determine which factors are associated with the degree of sensitivity of performance evaluation criteria to the impact exerted by local environments upon subsidiaries' activities. The determination of such a degree of sensitivity required the construction of a model which was able to link the nature of major elements of the evaluation process to the capability of the formal evaluation criteria to take relevant environmental influences into account. Basically, the model consists of six components representing the major characteristics of the evaluation process in use in each company, which have already been described in this summary. In brief, the model establishes a number of assumptions (see Exhibit 12.I), based namely on 1) the preference demonstrated by performance evaluation criteria for non-financial vs financial information; 2) the preference for non-profit based vs profit based indicators; 3) the preference for the internal reporting system as a global package of information vs a battery of individual measures of performance; 4) the number of performance standards used; 5) the

variability of the targets; and, finally, 6) the variability of the overall evaluation criteria.

A test conducted in the chapter (Test 2), revealed that the degree of sensitivity of a company's formal performance evaluation criteria to environmental influences is associated with three company characteristics: commitment to foreign operations, internationalization, and exposure to host country and government influence. It was found that the higher the percentage of a company's sales and assets abroad to total group sales and assets (this being a surrogate for commitment to foreign operations), the greater the number of countries where a company owns industrial facilities (this measuring internationalization), and the higher the degree of exposure of a company to local influences, the more the formal performance evaluation criteria used to assess foreign subsidiaries' operations take into account relevant environmental differences that differ from one geographic area to another. As it would be expected, MNCs whose business is subject to high degrees of exposure to host country and government influence, tend to employ evaluation criteria that are more sensitive to the environment. In fact, it may be argued that it is only natural that companies whose operations can be seriously affected by changes in the situation of the host environments, employ subsidiary evaluation and control methods that take extensively the environment into account. Likewise, the magnitude of the involvement of a MNC overseas as expressed by its commitment to foreign operations and its level of internationalization, appears as a natural justification for the extensive degree to which evaluation criteria are sensitive to the environment.

Another test demonstrated that the degree of sensitivity of a company's formal performance evaluation criteria to environmental influences is associated with the way in which the environmental assessment activity is organized in the company's headquarters (Test 3). Firms where the environmental assessment function was institutionalized tend to use performance evaluation criteria that take widely into account relevant environmental influences. On the other hand, companies with no environmental assessment activity in headquarters (either formally or informally) tend to assess their

foreign subsidiaries' performance using criteria that take very little account of influences exerted by local environments over subsidiaries' activities. This confirms an hypothesis previously formulated (chapter 7), in the sense that the degree of sophistication of the evaluation criteria as regards their sensitivity to the environment, finds a parallel in the level of complexity of the environmental assessment activity conducted in headquarters. It appears, therefore, that those MNCs to which the monitoring of local environments is relevant enough to warrant the support of an environmental assessment activity in headquarters, also consider important that their performance evaluation criteria are sensitive to the host environments.

So far, the analysis has focused on the criteria employed in headquarters to control and evaluate the operations of foreign subsidiaries. In addition, the study also offers some evidence on the assessment practices used in headquarters in appraising the performance of the managers responsible for overseas subsidiaries. It was found that the great majority of companies formally assess managerial performance, and that most of these companies use the internal reporting system operated between subsidiaries and headquarters as the informational source on which the assessment of managers is formally based. In a few cases, managerial assessment extends beyond the analysis of results reported by subsidiaries in the internal reporting system into areas related to the personal specific acting of the managers. In such cases, managerial performance was found to be linked to "personnel appraisal criteria", which are not within the scope of this study. Among those companies where the formal assessment of managers is based on information provided by the internal reporting system, the overwhelming majority use the same or similar criteria to evaluate managers and operations. The result is in agreement with the findings of the American surveys reviewed in chapter 6. The result appears to be in contravention to the Prescription in the theory of a separation between the methods used to evaluate the two objects of control. However, most executives in headquarters emphasized that results obtained by subsidiaries ought to be carefully and sensibly interpreted when making judgements on the way in which managers responsible for those subsidiaries acted. It is

in this context that informal appraisal takes place, as a complement of the formal evaluation process. Informal aspects of performance evaluation will be studied in the next chapter.

By describing and analysing the features of the performance evaluation systems in operation in MNCs, and by aggregating these features into a model of environmental sensitivity, the study created an independent means of assessing the effectiveness of a company's system in recognizing environmental influences. In addition, the study collected the opinion of headquarters executives as to the effectiveness of formal evaluation criteria in taking account of relevant environmental influences. The very large majority of respondents believe that the assessment criteria they use to evaluate subsidiaries and managers are at least moderately effective. Only in a small proportion of cases are criteria considered not at all or little effective. Studies on American MNCs, in particular Morsicato [1980], and Choi, Czechowicz and Bavishi [1982], reached a different conclusion in that the majority of the respondents believed that their systems were not adequately taking into account environmental differences. A comparison of these with the present study, based on executives' opinion, suggests that perhaps the systems utilized in British MNCs are more sensitive to the environment than those in U.S. multinationals. This tentative conclusion reinforces a similar suggestion made by Choi, Czechowicz and Bavishi [ibid.], who studied companies in the U.S. and Europe.

Furthermore, this conclusion is also supported by the findings of a test carried out in the chapter (Test 4), which revealed that the Perceptions of headquarters executives relative to the effectiveness of the evaluation systems to take the environment into account generally coincide with the environmental sensitivity of the systems, as measured in the study by using an independent criterion. Companies which use formal assessment criteria that are more sensitive to the environmental impact tend to be those whose headquarters executives think that the criteria are more effective in recognizing important environmental influences. The inverse also applies, i.e. in MNCs whose systems are relatively unsensitive to the environment, executives tend to perceive the systems as little effective. Such a

finding brings support to the conclusion above, since it lends credibility to the executives' perceptions insofar as their opinions about the effectiveness of the systems to take the environment into account correspond to the intrinsic capability of the systems, as judged by an autonomous instrument.

The study also collected the opinion of headquarters executives on the extent to which formal assessment criteria should ideally be able to take relevant environmental factors into account. A large proportion of managers in parent companies said they would like the criteria they employ in the assessment of subsidiaries and managers to be capable of extensively recognizing important environmental influences on local operations. A comparison that was made for the judgement of respondents relatively to the actual and to the desired level of effectiveness of evaluation criteria in recognizing environmental influences, show that executives would generally like the assessment criteria used in their firms to reflect environmental influences to a greater extent than they actually do. This gap is frequently filled by the introduction of subjective, informal judgement in the evaluation process. A gap such as this was also found in Morsicato [1980].

Finally, the chapter studied in considerable detail the nature of major influences exerted by local environments on companies' subsidiaries. Using a list of factors which respondents were asked to rank by order of importance, it was possible to identify the most influential environmental factors for each area in the world. Economic factors such as economic growth and market size were found to be of prime concern in certain areas, namely Europe, North America, and Oceania. On the other hand, factors of political, legal and social nature, such as political stability, government controls, and attitudes towards foreign companies are considered of paramount importance specially in areas of the Third World. The perceptions of headquarters managers regarding the variability of foreign environments differ substantially from company to company. This is measured by a variable created in the chapter which provides an indication of how different foreign environments operated by a company are perceived to be.

As explained in chapter 7, it is possible that the perceptions of environmental variability on the part of the executives involved in subsidiary performance evaluation may influence the design of the evaluation and control systems that are in operation in multinationals. Empirical surveys (chapter 6), namely Persen and Van Lessig [1979], Morsicato [1980], Choi, Czechowicz and Bavishi [1981], and Yunker [1982] detected that managers normally viewed the influences of external environments on subsidiaries to be different across host locations, and suggested that such views would probably play an important role in the selection of criteria used in the control and evaluation of foreign subsidiaries.

This study attempted to determine whether the actual capability of evaluation systems to reflect the environment is associated with the perceptions of environmental variability of the executives who use the systems. Preliminary to the examination of such a relationship, the study explored the way in which managers' perceptions of environmental variability were related to their views of the extent to which formal performance evaluation criteria should be able to take the environment into account. A test (Test 5) showed that executives who perceive a higher variability in the impact of foreign environments on subsidiaries operating in different locations tend simultaneously to believe that assessment criteria should to a greater extent be capable of taking into account relevant environmental influences in the evaluation of subsidiaries and in the assessment of managers. This suggests that the requirements sought for evaluation criteria as far as environmental recognition is concerned are linked to the way in which the environment is seen to differ among different overseas operations.

In another test (Test 6), then, the association between the perceptions of variability of foreign environments and the actual capability of formal evaluation criteria to take environmental differences into account was explored. Here, inconclusive results were obtained. Hence, it is not possible to say that the requirements of headquarters executives as to the level of environmental recognition ideally to be achieved by the performance evaluation systems finds a correspondence in the actual attributes of

the systems. It appears, therefore, to be likely that the extent to which evaluation systems in operation in MNCs are capable of taking environmental differences into account does not adequately respond to the needs of the executives involved in performance evaluation. This conclusion is furthermore reinforced by the fact already reported that managers in headquarters generally would wish the assessment criteria used in their companies to reflect environmental influences to a greater extent than they actually do.

Footnotes:

- (1) In the questionnaire administered to companies, respondents were explicitly asked to answer questions having in mind the typical (most common) case in their companies, whenever different practices differed among foreign subsidiaries.
- (2) This finding has been confirmed by the application of the Wilcoxon matched-pairs signed-ranks test to the relevant variables. Given that the level of significance obtained was much above the cut-off level of 5 percent, no statistically significant difference between the two variables was found.
- (3) It was considered that explanatory variables with less than 10 categories do not meet the requirement of a large number of categories. This excludes the possibility of using Spearman's rho to test independence between CRIT and explanatory variables based on scales (5 categories), as well as between CRIT and variable NAREA (7 categories).
- (4) Contrary to what has been the norm in the study, this crosstabulation is not presented here. Variable CRIT results from the application of a theoretical formula, that renders the individual scores of the variable meaningless. For this reason, a contingent tabulation involving variable CRIT is of difficult interpretation, and its inclusion in the study was not considered necessary.
- (5) Judgements of executives on the evaluation criteria used in the assessment of subsidiary managers, were considered, for purposes of Test 4, only for those companies which base the formal assessment of foreign subsidiary managers on information provided by the internal reporting system. Only in this way can the scores from variable CRIT be compared with the headquarters executives' judgements on the evaluation criteria used to assess subsidiary managers.
- (6) The computation of Kendal's W could not be directly carried out using SPSS since the package available to the researcher did not provide the facility to compute such a statistic in the way it was required in the study. Appendix F presents the computer programme developed to calculate this statistic.

CHAPTER 13 - THE USE OF INFORMAL INFORMATION FOR FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL

13.1. Introduction

The different dimensions of foreign subsidiary performance evaluation explored so far in the study have all been addressed in the context of the formal assessment procedures institutionalized in companies. Informal aspects of performance evaluation will now be studied in the present chapter. Such informal evaluation of performance was equated in the study (chapter 4) with the use of information collected through informal (i.e. non-official, non-institutionalized) channels of communication. There are reasons for believing that a substantial amount of information on subsidiaries' operations and their managers is usually gathered by headquarters executives from sources other than the official internal reporting system.

This chapter attempts to determine the significance for subsidiary performance evaluation of information gathered through informal channels, and how this compares in importance with the information collected via the official internal reporting system. The informal communication channels most often used in companies will also be identified. In order to comprehend reasonably the role of informal information in the performance evaluation and control process, the chapter seeks to characterize the nature of this information, and also to discover why it is used to assess subsidiaries and their managers. Later in the chapter, relationships involving characteristics of the informal information collected, as well as opinions regarding importance and purpose of such information will be statistically tested against a number of companies' practices.

13.2. Report on Companies' Practices

13.2.1. Informal Communication Channels Used in Performance Evaluation

Executives in headquarters responsible for performance evaluation gather information about subsidiaries' operations and their managers using simultaneously a number of informal channels of communication. Companies were asked to list in the questionnaire those informal communication channels most frequently used in headquarters. Two channels were found to be very popular: personal visits to subsidiaries by parent company executives, mentioned by nearly every company, and contacts with subsidiary personnel by such means as the telephone, telex, letter, and electronic mail, mentioned by 89 percent of respondents (see Table 13.I). Also frequently mentioned were personal visits to the U.K. by subsidiary managers, and social meetings. A widespread number of other communication channels were also listed. For reasons of simplicity of presentation these are reported in Table 13.I as "other channels internal to the company", and "other channels external to the company". The former, includes comments by non-executive directors, conclusions achieved by team studies, ad-hoc reports stimulated by headquarters enquiries, etc. The latter, includes business and bank contacts, other parent companies, government contacts, C.B.I. and trade associations, contacts with independent advisers (normally people of recognized reputation in host countries), and a channel in which some companies placed particular emphasis: auditors.

Interviews with senior executives helped in consolidating the belief that informal information plays a vital role in performance evaluation. In the words of a company director interviewed: "[informal information about subsidiaries' operations] is regarded [in our company] as essential to accomplish a reasonably equitable and comprehensive evaluation". It appears that informal information is

Table 13.I - Major Informal Communication Channels Used to Collect Information About Foreign Subsidiaries and Their Managers

	COUNT	PCT OF RESPONSES	PCT OF CASES
Personal visits to subsidiaries	90	31.2	97.8
Contacts with subsidiary personnel (by telephone, telex, letter, electronic mail)	82	28.5	89.1
Personal visits to the U.K.(by subsidiary managers)	57	19.8	62.0
Social meetings	28	9.7	30.4
Other communication channels <u>internal</u> to the company	15	5.2	16.3
Other communication channels <u>external</u> to the company	16	5.6	17.4
TOTAL RESPONSES	288	100.0	313.0

N (number of valid cases) = 92

omni-present in the minds of those who are involved in the subsidiary evaluation process, supplementing and shaping-up information reported through the official channels. It also appears that after acquiring information through informal channels, managers tend to forget the respective sources. References to "hearing through the grape vine", so common among executives, seem to indicate that information is acquired, and indeed judgements made, from many pieces of information that are put together in the executives' minds, leaving behind a blurred image of the respective sources.

13.2.2. Motives for the Use of Informal Information

There are many reasons why executives in headquarters feel the need to use information collected through informal channels of communication in the performance evaluation process. In chapter 4 (see section 4.4.1.) the use of informal information was generally attributed to the limitations of the formal information systems, as suggested in the literature. Table 13.II lists the main reasons for the use of informal information indicated by questionnaire respondents. The largest proportion of executives (83 percent of the total) said that they use informal information as a means of covering exceptional and unpredicted situations. Two other reasons were also frequently pointed out: 56 percent of the respondents admitted that informal information was used because it provides a higher volume of information on vital issues, and 52 percent said that informal information satisfies the need for confidentiality. The remaining reasons suggested to respondents in the questionnaire, were ticked only in a minority of cases: 41 percent of the executives declared that they use informal information for better timing, whereas 35 percent said that informal information was considered more understandable and useful than formal information. It is noteworthy that reasons dealing with the need for higher accuracy and reliability in information, one of the main points raised by Mintzberg [1975], were indicated by a very small number of respondents (10 and 5 percent, respectively). In the category others in Table 13.II one particular reason for the use of informal information is predominant:

**Table 13.II - Main Reasons for the Use of Informal Information
in Performance Evaluation**

	Count	Percent of Cases
Informal information is used to satisfy the need for:		
.information covering exceptional and unpredicted situations	80	83.3
.a higher volume of information on vital issues	54	56.2
.confidential information	50	52.1
.more timely information	39	40.6
.more understandable and useful information	34	35.4
.more accurate (i.e. precise information)	10	10.4
.more reliable information	5	5.2
.other reasons	7	-
		N = 96

NOTES: Count indicates the number of respondents who ticked
the respective reason.
N represents the number of valid cases.

in several cases informal information was said to be collected when there is a need for information less easily quantified. In these companies, information reported through the official internal system is exclusively of a quantitative nature.

The study attempts to discover some of the purposes and nature of the information collected through informal channels for performance evaluation. Respondents to the questionnaire were asked to indicate whether they agreed or disagreed with each of the statements that were provided in a list. This was an attempt to probe into aspects related to the use of informal information that are generally difficult to characterize in an explicit manner. Results achieved are, therefore, necessarily impressionistic, but hopefully they will shed some light into the role of informal information in performance evaluation. Table 13.III reports the number of respondents who agreed with each of the statements. Results reflect opinions about the use of informal information both for the evaluation of foreign subsidiaries, and for the assessment of managers. To start with, the great majority of the respondents agreed that the frequency of informal information between subsidiaries and headquarters is generally high respectively for the monitoring of subsidiaries and their managers. Further, slightly more than half of the respondents said that informal information is mainly concerned with non-routine matters, when monitoring both subsidiaries and managers. A very noteworthy finding is that almost every executive questioned agreed that informal information tends to supplement information reported via the formal channels, whereas only a small group said that there is a tendency in their companies for informal information to replace formal information.

As to the purposes sought for information collected through informal channels, nearly three quarters of the respondents admitted that an important purpose of informal information when used for controlling and evaluating subsidiaries is to anticipate information that is subsequently reported via the formal channels. Such purpose was considered important by a smaller number of respondents (59 percent of the total) when informal information is used for assessing subsidiary managers - Table 13.III. Confirmation of information reported via formal channels was another important purpose of informal information

Table 13.III - Nature and Purposes of Informal Information Used in the Evaluation of Subsidiaries and Their Managers

	Evaluation and control of foreign subsidiaries		Assessment of foreign subsidiary managers	
	Count	Percent of Cases	Count	Percent of cases
The frequency of informal communication between subsidiaries and HQ is generally high	68	71.6	53	60.9
Informal information is mainly concerned with non-routine matters	49	51.6	47	54.0
Informal information tends to supplement information reported via the formal channels	94	98.9	84	96.6
Informal information tends to replace information reported via the formal channels	5	5.3	15	17.2
An important purpose of informal information is:				
.to anticipate information that is subsequently reported via the formal channels	68	71.6	51	58.6
.to confirm information reported via the formal channels	54	56.8	52	59.8
.to compensate for the rigidity and insufficiencies of the information reported via the formal channels	47	49.5	45	51.7
	N=95		N=87	

NOTES: Count indicates the number of respondents who agreed with the respective statement.
N represents the number of valid cases.

for the majority of companies both when evaluating subsidiaries and when assessing managers. Finally, about half of the respondents were in favour of a statement which suggested that an important purpose of informal information is to compensate for the rigidity and insufficiencies of the information reported via the formal channels (Table 13.III).

13.2.3. Importance of Informal Relatively to Formal Information

In order to place in perspective the relevance of informal relatively to formal information, headquarters executives were asked to compare in terms of importance both types of information when evaluating foreign subsidiaries and when assessing their managers. Results are reported in Table 13.IV. Information collected via formal channels was considered important or very important (rated 4 or 5 in a 1 to 5 scale) for the evaluation and control of subsidiaries in the overwhelming majority of companies. On the other hand, information collected via informal channels used for the same purposes was only attributed that level of importance in slightly less than half of the companies. This difference is significant in statistical terms, as confirmed by the results obtained with the Wilcoxon matched-pairs signed-ranks test (Table 13.V). As seen earlier, this is a test of differences for two related samples, appropriate for variables measured at the ordinal-level. The very high level of significance obtained for the test (higher than 0.1 percent), shows that when controlling and evaluating foreign subsidiaries headquarters executives rely significantly more on formal than on informal information.

As regards the assessment of managers responsible for foreign subsidiaries, Table 13.IV reports that information collected via formal channels was considered important or very important (rated 4 or 5 in scale) by slightly more than half of the respondents. A similar result was obtained for information collected via informal channels. The test of differences conducted (Table 13.V), confirms the non-existence of a statistically significant difference in the importance

Table 13.IV - Relative Importance Attributed to Formal and Informal Information for the Assessment of Foreign Subsidiaries and Their Managers

Variables		R a t i n g					Statistics	
		1 Very low	2	3 Moderate	4	5 Very high	N	Median
EVALUATION AND CONTROL OF FOREIGN SUBSIDIARIES								
.Information collected via formal channels	FLSUB	1	1	11	38	44	95	4.41
		13.7%			86.3%			
.Information collected via informal channels	INFLSUB	4	7	37	29	17	94	3.47
		51.1%			48.9%			
ASSESSMENT OF FOREIGN SUBSIDIARY MANAGERS								
.Information collected via formal channels	FLMAN	4	9	28	27	25	93	3.70
		44.1%			55.9%			
.Information collected via informal channels	INFLMAN	2	8	33	32	18	93	3.61
		46.2%			53.8%			

N represents the number of valid cases

Table 13.V - Wilcoxon Matched-Pairs Signed-Ranks Test to Compare Differences in Importance Attributed to Formal and Informal Information

	Variables	Cases	Z	Two-Tailed Probability
=====				
Evaluation and Control of Foreign Subsidiaries:				
.Information collected via formal channels	FLSUB	94	-5.322	(0.000) **
.Information collected via informal channels	INFLSUB			

Assessment of Foreign Subsidiary Managers:				
.Information collected via formal channels	FLMAN	93	-0.468	(0.639)
.Information collected via informal channels	INFLMAN			
=====				
Information Collected Via Formal Channels:				
.Evaluation and control of subsidiaries	FLSUB	93	-5.135	(0.000) **
.Assessment of subsidiary managers	FLMAN			

Information Collected Via Informal Channels:				
.Evaluation and control of subsidiaries	INFLSUB	92	-1.146	(0.252)
.Assessment of subsidiary managers	INFLMAN			

NOTE: ** Significant $p < 0.01$ (i.e. 1%)

attributed to formal and informal information, in the assessment of subsidiaries' managers. This means that, contrary to the findings for the evaluation of subsidiaries' operations, executives in headquarters seem to rely equally on formal and informal information when assessing managers responsible for subsidiaries. As it would be expected from the conclusions just reached, information collected via formal channels was found to be significantly more important for the evaluation of subsidiaries than for the assessment of managers (level of significance of the Wilcoxon test is higher than 0.1 percent) - Table 13.V. On the other hand, information collected via informal channels was found to be equally important to evaluate subsidiaries and to assess their managers (Table 13.V).

13.2.4. Extent of Collection of Environmental Information Through Informal Channels

Information about foreign operations obtained through informal channels of communication, may be concerned not only with the internal activities of subsidiaries, but also with the surrounding local conditions external to the subsidiaries and likely to influence their operations. This latter aspect was explored in the questionnaire where respondents were asked to indicate the extent to which foreign environmental information used in performance evaluation is usually collected via informal channels. According to Table 13.VI only a minority of companies consider that information on foreign environments is extensively gathered through informal channels. In fact, only 17 firms (i.e. 18 percent of the total), said that informal environmental information is collected extensively or very extensively for the evaluation and control of foreign subsidiaries. All the other firms, said that informal environmental information used for this purpose is not collected at all (7 percent of the total), or is collected to a little or moderate extent (75 percent).

As regards the extent of collection of informal environmental information for the assessment of subsidiaries' managers, results are similar⁽¹⁾ to those just reported: only 21 companies (i.e. 22 percent)

Table 13.VI - Extent of Collection of Foreign Environmental Information Through Informal Channels of Communication

	R a t i n g					Statistics	
	1	2	3	4	5		
	Not at all	To a moderate extent		Very extensively		N	Median
Environmental information collected informally for:							
.The evaluation and control of foreign subsidiaries	7	34	37	13	4	95	2.68
	82.1%			17.9%			
.The assessment of foreign subsidiaries' managers	12	35	26	16	5	94	2.50
	77.7%			22.3%			

N represents the number of valid cases

considered to gather extensively or very extensively this type of information; the rest, said either that the information is not collected at all (13 percent), or that it is collected to a limited or moderate extent (65 percent) - Table 13.VI. Later, this chapter will explore whether companies where foreign environmental information is extensively collected through informal channels tend to be those where environmental information is absent from the internal reporting system, and/or those which use performance evaluation criteria with low levels of sensitivity to the impact of local environments.

13.2.5. Discussion and Conclusions

Throughout the previous chapters where the results of the study have been examined, it was prevalent the impression that apparent weaknesses of the formal criteria of subsidiary performance evaluation were compensated by the use of informal information. The role of such an information in the evaluation and control process is addressed here. However, due to the elusive nature of informal practices in organizations, which renders their study difficult, only tentative conclusions are hoped to be reached.

The present survey adds to the evidence accumulated over the years by authors such as Davis [1953], Aguilar [1967], Mintzberg [1973], and Clancy and Collins [1979] (see chapter 4), who found that decision makers frequently rely on data retrieved and reported outside the formal communication network. In effect, the great majority of respondents to the questionnaire admitted that in their companies the frequency of informal communication between foreign subsidiaries and headquarters is high. In addition, in-depth interviews with executives revealed that informal information plays a vital role in performance evaluation. Moreover, such high levels of informal communication appear to confirm the suggestions of Lombard [1969] and Egelhoff [1984] that in European multinationals informal information exchanged between foreign subsidiaries and headquarters is abundant. This conclusion apparently contrasts with the situation found in American MNCs, as explained earlier in chapter 4.

A large number of different communication channels of an informal nature are used to collect information about overseas operations. Among the most widely employed are personal visits to subsidiaries by parent company executives, as well as visits to the U.K. by subsidiary managers, and contacts by such means as the telephone, telex, letter, and electronic mail.

The main reasons indicated for the use of informal information are related to the headquarters executives' needs for data on exceptional and unpredicted situations, and to the necessity of being provided with a higher volume of information on special issues. Another important reason is related to the timeliness of the data required. These reasons can be reconciled with those enunciated by Mintzberg [1975] who attributed the use of informal information to certain weaknesses of the MISs, namely the systems being too limited in scope, and too aggregate in nature, as well as providing information too late. Another weakness emphasized by Mintzberg, the unreliability of the formal system, was not considered a relevant issue by the respondents. One particular motive for the use of informal information, is the need for confidentiality which, in the opinion of the respondents, the formal channels cannot provide. When asked about the main purposes of informal information, more managers considered that the anticipation of information subsequently reported via the formal channels is important for the evaluation of subsidiaries than for the assessment of managers. In contrast, confirmation of formal data, and compensation for the rigidity and inefficiencies of the formal information were regarded as important more often in the assessment of managers than in the control of subsidiaries.

As regards the role of informal vis-a-vis formal information, the study appears to confirm the suggestions made by Clancy and Collins [1979] that, contrary to what had been generally perceived in the literature, informal information acts as a useful and necessary adjunct to the formal system. In effect, whereas the near totality of respondents believes that informal information supplements the formal channels, only a tiny minority thinks that informal information replaces the information reported via the institutionalized systems. This point will be explored further in the next section.

The relative degree of reliance placed on both types of information was studied separately for the evaluation of subsidiaries and the assessment of managers. Results show that when controlling and evaluating foreign subsidiaries, headquarters executives rely more on formal than on informal information. On the other hand, when assessing managers responsible for subsidiaries, top executives rely equally on both types of information. This suggests that in this latter case, the information collected via informal channels is at least as important as that reported through the official MIS.

Of particular interest to the present study is the extent to which foreign environmental information relevant to subsidiaries' operations is collected through informal channels. In only a minority of companies is information on overseas environments extensively gathered in an informal way for the evaluation of subsidiaries and managers. In the next section, an attempt will be made to determine whether those companies whose performance evaluation criteria do not take the environment into account, compensate for that fact by making extensive use of environmental information collected through informal channels.

13.3. Findings on the Reliance Placed on Informal Information for Performance Evaluation and Characteristics of the Internal Reporting Systems

The role played by information collected through informal channels of communication in performance evaluation has just been explored above. The present section will now try to discover whether the extent to which headquarters executives rely upon informal information for the monitoring of subsidiaries and their managers, is associated with certain characteristics of the internal reporting systems. Considering that the internal reporting system is the major formal channel of communication in a company, it seems natural to believe that a greater use of informal channels of communication is motivated by shortcomings of the formal reporting system. It is generally

anticipated (see chapter 7) that companies which use more informal information in the evaluation of performance, have less sophisticated reporting systems operating between foreign subsidiaries and headquarters. Due to the difficulty in characterizing objectively a phenomenon whose nature is essentially subjective, the results from the statistical tests that will be conducted should be interpreted carefully, keeping always in mind that the findings in this section are only tentative.

Test 1

The purpose of this first test is to discover how the importance attributed to informal information used in subsidiary performance evaluation relates to the volume and nature of the information reported through formal communication channels. In chapter 7 (section 7.4.) an hypothesis was formulated according to which the role of informal information is seen mainly as a means of overcoming the deficiencies of formal information. In this sense, performance evaluation systems that are elaborate and comprehensive would require less informal information than narrow and unsophisticated systems. This being so, an indirect relationship is anticipated between the magnitude of the flow of information reported in companies between subsidiaries and headquarters and the importance for performance evaluation attributed in headquarters to information collected through informal channels of communication. A similar indirect relationship is also anticipated between the relative weight of non-financial information in the companies' formal reporting systems, and the importance attributed to informal information.

Two variables were created in chapter 11 (section 11.3.) which measure the volume and nature of the information included in firms' internal reporting systems. One of these variables (variable TR) measures the magnitude of the flow of information reported by the typical subsidiary in each company; its scores represent the number of formal reports forwarded by a subsidiary to headquarters during one year. The other variable (variable PERCNFR) is concerned with the nature of the information reported, and measures the relative weight of non-

financial reports (e.g. market shares, production output, labour relations, product quality, environmental conditions encountered locally, etc.) in a company's total reporting system; the scores of this variable reflect the percentage of non-financial reports submitted by a subsidiary during one year in relation to the total number of reports submitted by the subsidiary in the same period.

The null hypothesis states that:

H₀₁ : there is no association between the importance attributed in a company to information collected informally for the purpose of evaluation and control of foreign subsidiaries and either:

- . the magnitude of the flow of information reported in the company by each foreign subsidiary; or
- . the relative weight of non-financial information in the company's total reporting system.

Importance attributed to informal information was measured using a five-point scale. Due to the low number of categories of this variable, Spearman's rho cannot be utilized, despite the independent variables being both at the ratio-level. Chi-square was, therefore, the statistical technique employed.

The tests of association conducted show that the importance with which informal information is perceived by executives when evaluating performance is related at a significant level with both the volume and the nature of formal information reported by subsidiaries (2 and 3 percent, respectively) - Table 13.VII. A close look at the contingent tabulations for the two pairs of variables, reveals, however, that the direction of the relationship is in both cases opposite to the one hypothesized.

The crosstabulation between the variables which measure the importance attributed to informal information and the number of formal reports submitted during one year by the typical subsidiary in each company shows that firms with low volumes of formal reporting tend to give less importance to informal information for performance evaluation

Table 13.VII - Chi-Square Tests of Independence Between the Importance Attributed to Informal Information and the Volume and Nature of the Information Reported Formally

		TR	PERCNFR
Level of importance given by	χ^2	7.85	4.48 (a)
HQ management to information	p	(0.020)	(0.034)
collected informally for the	d.f.	2	1
purpose of evaluation and	N	94	94
control of foreign subsidiaries	Cramer's V	0.289	-
(INFLSUB)	Phi	-	0.240
	Unc.Coeff.	0.062	0.042

NOTES: * Significant $0.01 < p < 0.05$

(a) Chi-square subject to Yate's Correction for continuity

Key to symbols: χ^2 = chi-square statistic
p = level of significance
d.f. = degrees of freedom
N = number of valid cases
Unc.Coeff.= uncertainty coefficient
(asymmetric) with INFLSUB
dependent.

Key to acronyms: TR = Total number of formal
reports submitted by each
subsidiary in a company
during one year
PERCNFR = Percentage of formal non-
financial reports in
relation to the total
number of formal reports
submitted in a company by
each foreign subsidiary
during one year.

than firms with high levels of formal reporting (see Table XVII in Appendix D). In fact, nearly two thirds of the companies (63 percent) which have a low flow of information between subsidiaries and headquarters (71 or less formal reports submitted by each subsidiary during one year), said that information collected outside the formal reporting system had only little to moderate importance (rates of 1 to 3 in a 5-point scale). The same level of importance was attributed to informal information by slightly over half of the companies (57 percent) which have a moderate flow of formal information (72 to 122 reports submitted by subsidiaries over a year). Finally, nearly three quarters of the firms (74 percent) with high formal reporting frequency (firms whose subsidiaries forward more than 123 reports to headquarters in one year), said that informal information was highly or very highly important for subsidiary performance evaluation.

A similar result was found for the crosstabulation between the importance of informal information for performance evaluation and the percentage of non-financial reports submitted by subsidiaries during one year in relation to the total number of reports. Companies with a high proportion of non-financial information in their internal reporting systems were found to perceive informal information as more important than companies whose systems include a low proportion of formal reports of a non-financial nature (Table XVIII in Appendix D).

Summary: Test 1 sought to demonstrate that the level of importance for performance evaluation attributed by headquarters executives to information collected through informal channels was associated with the volume and nature of the information reported by subsidiaries via the internal formal channels. It was expected to find a situation where low volumes of formal information included in the internal reporting systems would be associated with a high reliance on informal information. It was also expected that formal systems composed predominantly of financial information would be associated with high levels of reliance on information collected outside the formal reporting system. Results of the statistical tests conducted reveal that variables are significantly associated, however, behaving in a direction opposite to what was expected. In fact, the tests show that the higher the volume of formal information reported between

subsidiaries and headquarters, and the higher the weight of non-financial information reported formally, the more important the information collected through informal channels is likely to be perceived by executives involved in the evaluation of subsidiary operating performance. This suggests that perhaps the volume and nature of formal information stimulates the search of information through informal channels, and appears to reinforce the idea presented above (section 13.2.5.) that informal information acts as a complement to the data submitted formally.

The two tests that follow are concerned with foreign environmental information collected in headquarters through informal channels of communication. The extent to which such information is collected for the purpose of evaluation and control of foreign subsidiaries and of assessment of managers has been reviewed in section 13.2. There, it was suggested that the extent of use of informal environmental information in performance evaluation might be related to both the sensitivity of the performance evaluation criteria to the impact of local environments upon subsidiaries' operations, and the way in which environmental information is reported in the internal formal communication channels. The purpose of the following tests is to explore such relationships using the appropriate statistical techniques.

Test 2

This test aims at determining whether the extent to which information on foreign environments obtained through informal channels is associated with the degree of sensitivity of formal performance evaluation criteria to foreign environmental influences. Earlier in chapter 12 (section 12.4.), a variable was created (variable CRIT) which measures the capacity of a performance evaluation system to take account of relevant environmental factors that influence the activities of subsidiaries operating in different geographic areas. This variable was constructed on the basis of the responses provided by companies as to their practices regarding six major components of the foreign subsidiary evaluation process. It provides a means of

assessing the effectiveness of a company's performance evaluation system in recognizing environmental influences.

It is anticipated, following an hypothesis in chapter 7, that companies with formal performance evaluation criteria relatively insensitive to environmental influences will collect more environmental information through informal channels, than companies with evaluation criteria that are particularly sensitive to the environment. In other words, it is expected that companies where the influences exerted by local environments are not taken formally into account in the performance evaluation process, will compensate for this by using informal environmental information more extensively.

The null hypothesis states that:

Ho2: there is no association between the extent to which foreign environmental information is obtained through informal channels in a company, and the degree of sensitivity of the company's formal performance evaluation criteria to the impact of local environments upon foreign subsidiaries.

Given that the extent of collection of informal environmental information is measured by an ordinal variable with only five categories, Spearman's rho could not be used here. The statistical technique employed was, therefore, based on chi-square.

The null hypothesis has been tested for two relationships. One, associates variable CRIT with the extent to which informal environmental information is collected for the purpose of evaluation and control of foreign subsidiaries. The other relationship, associates variable CRIT with the extent of collection of this type of information for the purpose of assessment of the managers responsible for subsidiaries(2).

Results of the tests conducted for the two relationships tested, were found both to be non-significant - Table 13.VIII. This means that the associations suggested in Test 2 cannot be accepted(3). The extent of use of informal environmental information in performance

Table 13.VIII - Chi Square Tests of Independence Between the Extent of Collection of Informal Environmental Information and the Sensitivity to the Environment of Performance Evaluation Criteria

		CRIT
Extent of collection through informal channels of foreign environmental information for the evaluation and control of foreign subsidiaries (INFLESUB)	χ^2	0.75
	p	(0.687)
	d.f.	2
	N	72
	Cramer's V	0.102
	Unc.Coeff.	0.008
Extent of collection through informal channels of foreign environmental information for the assessment of foreign subsidiaries' managers (INFLEMAN)	χ^2	1.92
	p	(0.383)
	d.f.	2
	N (a)	48
	Cramer's V	0.200
	Unc.Coeff.	0.030

NOTES: (a) Only those cases which base the formal assessment of managers on information provided by the internal formal reporting system, were included here.

Key to symbols: χ^2 = chi-square statistic
p = level of significance
d.f. = degrees of freedom
N = number of valid cases
Unc.Coeff.= uncertainty coefficient (asymmetric) with INFLESUB and INFLEMAN dependent.

Key to acronyms: CRIT = Sensitivity of a company's formal performance evaluation criteria to the influences exerted by local environments upon foreign subsidiaries' operations.

evaluation, cannot be shown, therefore, to be influenced by the degree with which the formal evaluation criteria are capable of taking into account relevant environmental factors that vary from one geographic area to another.

Summary: Test 2 attempted to demonstrate that companies in whose headquarters foreign environmental information is extensively collected through informal channels with the purpose of aiding in the evaluation of subsidiaries and managers, tended to be companies which operate formal performance evaluation criteria with low levels of sensitivity to environmental influences. It was expected to conclude that executives in headquarters tended to use informal environmental information as a means of compensating for the relative insensitivity to the environment of the formal criteria employed in the evaluation of foreign operations. Results of the statistical tests performed do not permit, however, such a conclusion to be drawn.

Test 3

This test tries to ascertain whether the extent to which information on foreign environments obtained through informal channels is associated with the frequency of environmental information reported in the formal internal communication systems operated between foreign subsidiaries and companies' headquarters. Chapter 11 (section 11.2.) described the incidence and reporting frequency of reports on economic and non-economic environmental conditions faced in host countries, forwarded by subsidiaries operating abroad. It was found there that the great majority of companies include in their internal reporting systems reports on economic, and on political, legal and social conditions. In some companies such reports are submitted to headquarters only occasionally; in others, reports are submitted on a regular basis. Among the companies where reports on environmental conditions are regularly forwarded by subsidiaries, the frequency with which such reports are submitted was found to vary greatly, from once a year to once a month.

The test anticipates (see chapter 7) that firms where reports on local environmental conditions are frequent will tend to depend less on environmental information gathered through informal channels. Alternatively, it is anticipated that companies in whose reporting systems environmental information is either absent or reported infrequently will tend to use informal environmental information extensively. This hypothesis is motivated by the belief that more informal environmental information is used in the performance evaluation process when companies' formal channels of communication fall short in their provision of information on local environments.

The null hypothesis states that:

- Ho3: 1) There is no association between the extent to which foreign environmental information is obtained through informal channels, and the frequency with which reports on economic conditions in host countries are included in the internal reporting system.
- 2) There is no association between the extent to which foreign environmental information is obtained through informal channels, and the frequency with which reports on political, legal and social conditions in host countries are included in the internal reporting system.

As in the previous test, here the null hypothesis also includes the extent to which informal environmental information is gathered for the purposes both of evaluation of foreign subsidiaries, and of assessment of managers. Chi-square was again deemed to be the appropriate test.

According to Table 13.IX, results of the tests of association between the extent of collection of informal environmental information and the reporting frequency of reports on local economic conditions are significant at the 1 percent level, both when environmental information is used in the evaluation of subsidiaries, and in the assessment of managers. Contingency tables for the two pairs of variables tested indicate that the direction of the association is not as straightforward as it has been previously hypothesized. The analysis of these contingency tables (presented in Appendix D) reveals

Table 13.IX - Chi-Square Test of Independence Between the Extent of Collection of Informal Environmental Information and the Frequency With Which Environmental Reports are Included in the Formal System

		ECOND	PLSCOND
Extent of collection through informal channels of foreign environmental information for the evaluation and control of foreign subsidiaries (INFLESUB)	χ^2	13.97	8.91
	p	(0.0009) **	(0.012) *
	d.f.	2	2
	N	95	93
	Cramer's V	0.384	0.310
	Unc.Coeff.	0.110	0.090
Extent of collection through informal channels of foreign environmental information for the assessment of foreign subsidiaries' managers (INFLEMAN)	χ^2	9.50	5.77
	p	(0.009) **	(0.056) **
	d.f.	2	2
	N (a)	60	59
	Cramer's V	0.399	0.313
	Unc.Coeff.	0.118	0.074

NOTES: ** significant $p < 0.01$

* significant $0.01 < p \leq 0.05$

(a) Only those cases which base the formal assessment of managers on information provided by the internal formal reporting system were included here.

Key to symbols: χ^2 = chi-square statistic
p = level of significance
d.f. = degrees of freedom
N = number of valid cases
Unc.Coeff. = uncertainty coefficient (asymmetric) with INFLESUB and INLEMAN dependent.

Key to acronyms: ECOND = Reports on economic conditions in host countries included in the formal reporting system operated in a company between foreign subsidiaries and HQ.
PLSCOND = Reports on political, legal and social conditions in host countries included in the formal reporting system operated in a company between foreign subsidiaries and HQ.

a very interesting pattern of association. The table which crosstabulates the extent of collection of informal environmental information for the purpose of evaluation of subsidiaries, and the reporting frequency of reports on local economic conditions (Table XIX in Appendix D) presents the following picture: firstly, three quarters of the companies which do not include reports on economic conditions in their internal systems, or which include them only occasionally, were found to collect informal environmental information from a moderate to a very high extent (rated 3 to 5 in a 5-point scale). Secondly, nearly three quarters of the companies which have reports on economic conditions forwarded once a year by subsidiaries either do not collect informal environmental information at all, or collect it to a reduced extent (rated 1 or 2 in scale). Thirdly, nearly two thirds of the companies which request more than twice a year (e.g. every quarter, or every month) reports on economic conditions from subsidiaries, collect moderate to high volumes of informal environmental information. A similar pattern of association is encountered in the table which crosstabulates the extent of collection of informal environmental information for the purpose of assessment of subsidiary managers, and the reporting frequency of reports on local economic conditions (Table XX in Appendix D).

The association described above suggests that when firms do not have reports on environmental economic conditions included regularly in their internal formal channels of communication, they tend to collect extensively such an information through informal channels. It seems, therefore, that in these cases informal information plays a part in performance evaluation that has been overlooked by formal information. On the other hand, among companies which include on a regular basis economic environmental reports in their formal communication systems, some collect such information from informal channels to a very low extent, others collect it very extensively. The former are companies where reports on economic conditions are forwarded by subsidiaries only once a year. The latter are companies where such reports are forwarded frequently (e.g. once a month, or a quarter). It seems in these cases that informal information instead of compensating for shortcomings of the formal information, acts as a supplement to formal information, already extensively provided. It may

be that companies where economic environmental information is frequently reported via formal channels regard such information as so vital that a vast amount of information is also collected through informal channels.

As regards the tests of association between the extent of collection of informal environmental information and the reporting frequency of reports on local political, legal and social conditions, the statistical tests conducted show the existence of a significant relationship at the 5 percent level (1.2 percent), when environmental information is used in the evaluation of subsidiaries - Table 13.IX. The association obtained for the two variables when environmental information is used for the assessment of subsidiary managers did not prove to be statistically significant. The level of significance obtained (5.6 percent), is, however, just above the 5 percent cut-off - Table 13.IX. The direction of the association, as revealed by the contingency table which relates the extent of collection of informal environmental information for the evaluation of subsidiaries and the reporting frequency of non-economic information (political, legal and social), is opposite to the direction initially hypothesized. The respective crosstabulation (Table XXI in Appendix D) shows that companies which have reports on local non-economic conditions forwarded frequently by subsidiaries tend to collect environmental information very extensively from informal channels, for evaluating subsidiary performance.

Alternatively, companies which do not include reports on non-economic conditions in their internal reporting systems, or companies which include them but only occasionally or on an infrequent basis (i.e. once a year) tend either to omit informal environmental information from the evaluation process, or to use such information to a limited extent. In fact, while the great majority of companies (82 percent of the total) which gather little environmental information from informal channels (rates of 1 to 3 in a 5-point scale) have reports on local political, legal and social conditions submitted by subsidiaries very infrequently, if at all, the majority of companies (53 percent) which gather informal environmental information very extensively (rates of 4 and 5) have such reports submitted by subsidiaries on a frequent basis

(e.g. monthly, quarterly) - Table XXI in Appendix D.

This conclusion differs from the one drawn from the association previously reported, only to the extent that firms which do not include (or only occasionally include) reports on non-economic conditions in their formal reporting channels, tend to collect small volumes of environmental information through informal channels. Previously, it was seen that firms which do not include (or only occasionally include) reports on economic conditions in their formal reporting channels, tend to compensate for this by collecting high amounts of environmental information through informal channels. A possible explanation for this difference is suggested by findings reported earlier in chapter 11 (section 11.2., and Test 3 in section 11.3.). There, it was found that reports on environmental economic conditions are more common than reports on non-economic conditions, and that their introduction in companies' formal reporting systems usually precedes the introduction of non-economic environmental reports. This suggests that more companies perceive economic environmental information as important for the evaluation process than non-economic environmental information⁽⁴⁾. This being so, it is possible that headquarters executives in companies whose formal systems fail to collect environmental information both of an economic and non-economic nature, while realizing the importance of economic information for performance evaluation, tend to overlook the importance of non-economic information. The consequence of this difference in opinion towards the two types of environmental information, may lead to one type being extensively collected via informal channels, and the other being informally collected only to a reduced extent.

Summary: The purpose of Test 3 was to explore the relationship between the extent to which information on foreign environments is collected through informal channels, and the frequency with which such an information is reported in the companies' formal communication systems. An inverse relationship was expected between the two variables, both when environmental information assists in the evaluation of subsidiaries, and when it helps in the assessment of managers. Such a hypothesis was based on the belief that the amount

of environmental information gathered through informal channels was substantially motivated by an insufficient amount of information provided by the normal formal sources. The tests of independence conducted demonstrate that the extent of collection of informal environmental information in companies' headquarters is associated at a significant level with the reporting frequency of formal information on economic conditions faced by subsidiaries in host countries, and also with the reporting frequency of formal information on political, legal and social conditions. However, the direction of the association was found to be opposite to what had been hypothesized. In general, firms where reports on local environmental conditions (economic, and non-economic) are frequently included in the internal reporting system were found to collect informal environmental information more extensively than corporations where formal environmental reports are forwarded by subsidiaries only once a year. It seems that informal environmental information used in performance evaluation acts in conjunction with the formal information, both closely complementing each other, and being as little or as much extensively collected as formal environmental information is provided with a low or a high frequency. Another interesting finding of Test 3 is that companies which do not include reports on economic conditions in their formal reporting systems, or which include them only on an occasional basis, tend to gather extensive informal environmental information. On the other hand, companies whose formal reporting systems do not include reports on political, legal and social conditions, or include them only occasionally, tend to collect low levels of informal environmental information. A possible reason for this difference may lie in the fact that economic information on foreign environments is generally considered more important for evaluating subsidiary performance than non-economic information. This being so, when economic environmental information is not reported formally, executives involved in the evaluation process would make sure that information is collected through informal channels. The same would not happen for political, legal and social information since most managers consider this information of only reduced importance for the evaluation process.

13.4. Summary and Conclusions

This final chapter of results was concerned with an important aspect of the performance evaluation process, often overlooked in research in the area. The chapter explored some informal aspects of performance evaluation, concentrating on the use made by headquarters executives of information that is collected through informal -i.e. non-official, non-institutionalized - channels of communication. Due to the essentially subjective nature of the phenomena studied here, any attempt to characterize them in an objective manner will necessarily encounter serious difficulties. The study tried to collect evidence on the use of informal information in a way which could enable comparisons among companies, and the use of inferential statistical techniques. A word of caution in the interpretation of results is, however, necessary since these findings should only be regarded as exploratory.

The study generally revealed that informal information plays an important role in performance evaluation. The existence of high levels of communication through informal channels between foreign subsidiaries and headquarters appears to confirm suggestions made by authors (see chapter 4) that European MNCs are more prone to use informal information in their decision making processes than American multinationals. Informal information used in performance evaluation is gathered from a number of channels of communication outside the official reporting system operated internally between foreign subsidiaries and headquarters. Some of the popular informal channels include personal visits to subsidiaries by parent company executives, contacts with subsidiary personnel by means of the telephone, visits to the U.K. by subsidiary managers, social meetings, and a host of other sources such as ad-hoc reports stimulated by headquarters enquiries, bank and government contacts, independent advisers, and auditors.

Many reasons for the use of informal information in the evaluation process were given by executives in headquarters. In general, they were related to the need for a kind of information that is not normally reported through the formal channels. Among the most common reasons are the provision of information covering exceptional and unpredicted situations, a higher volume of information on vital issues, the need for confidentiality, and the necessity for prompt information. These reasons are not far from those pointed out by Mintzberg [1975] when he attributed the use of informal information in decision making to a number of major weaknesses of the formal information systems.

An attempt to characterize further the informal information used both for the evaluation of subsidiaries, and the assessment of managers revealed that the majority of respondents consider that important purposes of informal information when evaluating subsidiaries are to anticipate information that is subsequently reported via the formal channels, and to confirm formal information. When information collected informally is used in the assessment of managers, the main purposes, indicated by the majority of respondents are, besides these two, to compensate for the rigidity and insufficiencies of the information reported formally.

The study was able to determine how executives in parent companies perceive the importance of informal and formal information both when evaluating foreign subsidiaries and when assessing their managers. A comparison of such perceptions indicated that when controlling and evaluating foreign subsidiaries headquarters executives rely significantly more on formal than on informal information. On the other hand, executives rely equally on both types of information when assessing managers responsible for subsidiaries.

Attention was centered in the level of importance attributed to informal information used for foreign subsidiary performance evaluation. A test conducted in the chapter (Test 1) revealed that the importance with which information collected informally is perceived by executives is associated with certain characteristics of the internal reporting systems. Such characteristics, are related to

the volume and nature of the information reported via the formal communication channels. The test shows that the higher the volume of formal information reported between subsidiaries and headquarters, and the higher the weight of non-financial information reported formally, the more important the information collected through informal channels is likely to be regarded. This reflects a direction between the variables that is opposite to the one anticipated. In effect, as revealed in chapter 4, the literature generally suggests that the use of informal information is motivated by the deficiencies of the formal communication system. This being so, it would be expected that managers involved in the performance evaluation process assigned higher importance to informal information when formal information was insufficient and unsophisticated. The test results, by pointing in the opposite direction, show that the degree of importance with which informal information is perceived is directly linked to the comprehensiveness and sophistication of the formal system. It appears, therefore, that the volume and nature of information generated through the institutionalized channels stimulates the search for informal information. This perhaps suggests a conclusion similar to the Clancy and Collins [1979] findings, in the sense that informal information would act as a useful and necessary complement to the data submitted formally, rather than a substitute that would imply an unnecessary dissipation of resources. Besides, respondents when directly asked this question were unanimous in considering that informal information supplements instead of replaces formal information in the performance evaluation process.

One aspect of particular interest to the study is the extent to which information about local environmental conditions experienced by subsidiaries abroad is collected informally by executives involved in performance evaluation. A test was conducted with the objective of determining whether the extent of collection of informal environmental information is associated with the capability of the formal performance evaluation criteria to take account of relevant environmental factors that influence the activities of foreign subsidiaries operating in different geographic areas (Test 2). Results of this test did not prove to be significant, and no conclusion can, therefore, be reached.

Another test (Test 3) explored the relationship between the extent to which information on foreign environments is collected through informal channels, and the frequency with which such information is reported in the companies' formal systems. Results were significant both for reports on economic conditions, and for reports on political, legal, and social conditions. In general, it was found that companies where reports on local economic and non-economic conditions are frequently submitted by subsidiaries collect informal environmental information more extensively than companies where formal environmental reports are submitted less frequently. The relative variation in the magnitude of the variables is opposite to the one that had been anticipated. This suggests, once again, that the volume of informal and formal information behave in conjunction in a similar direction.

The findings of test 3 are generally in agreement with those of test 1, both indicating that the use of informal and formal information in performance evaluation tends to be positively associated. This seems to imply that information collected via informal channels is used as an adjunct which closely complements information reported through the official channels. Indeed, the main reasons and purposes for the use of informal information pointed out by executives are consistent with this conclusion. Despite the difficulties encountered arising from the very nature of the subject studied, the chapter has, hopefully, demonstrated how important for the evaluation process informal information can be in U.K. MNCs.

Footnotes:

- (1) This has been confirmed by the application of the Wilcoxon matched-pairs signed-ranks test to the relevant variables. Given that the level of significance obtained was above the cut-off level of 5 percent, no statistically significant difference between the two situations was found.
- (2) The relationship between variable CRIT and the variable that measures the extent of collection of informal environmental information for the purpose of assessment of subsidiary managers, was only tested for those cases which base the formal assessment of managers on information provided by the internal reporting system. Only in this way can the scores of the two variables be meaningfully compared.
- (3) In statistical terms it means that the probability of incurring in a Type I error (i.e. reject H_0 when H_0 is true) is unacceptably high.
- (4) This conclusion is confirmed by results shown in Table 12.I (chapter 12).

CHAPTER 14 - SUMMARY AND CONCLUSIONS

14.1. Brief Review of the Background, Purpose and Methodology of the Study

The present study set out to examine the foreign subsidiary performance evaluation and control systems in operation in MNCs with a view to determining the extent and ways in which the influences of host country environments are taken into account in the evaluation process. In addition, the study intended to discover the profile of the multinationals which employ systems that are more sensitive to the environment.

The importance of the environmental issue in performance evaluation stems from a number of reasons having to do first with the application of the conditions necessary to the achievement of an equitable and effective assessment process, and second with the internal organization of multinationals and the nature of their activities which may render them particularly vulnerable to environmental influences. As to the first set of reasons, if the principle of authority and controllability is to be properly applied in managerial assessment a vast number of host country environmental conditions of an economic, political, legal, social and cultural nature must be taken into account since they influence performance and only to a very limited extent can be altered by the local management. Furthermore, the consideration of specific environmental influences on the operations of foreign subsidiaries contributes to a more complete understanding of the real potential of each subunit, this being invaluable for central management action and strategy formulation.

As regards the second set of reasons, economic and political forces which come into play in the business macro conjuncture may lead certain MNCs to adopt strategies of global integration characterized by highly centralized decision making and a closely integrated network of mutual relationships among subsidiaries. Such strategies mean that a close monitoring of environmental influences on foreign operations is essential since the failure of any of the subsidiaries may put in serious jeopardy the whole of the corporation. On the other hand, the very nature of the activities of MNCs may be such that they become potentially exposed to local host country influences and pressures. This is the case of companies whose products are of strategic importance to host countries or where major international customers are national governments or state owned enterprises. In such circumstances the evaluation of subsidiaries also require that the specific environmental conditions are understood and monitored.

The literature reviewed in the study has generally failed to make explicit the importance of the environment for the foreign subsidiary evaluation and control process. Moreover, the empirical evidence available on the criteria used by MNCs to assess the performance of foreign subsidiaries does not address this issue in a satisfactory way. A number of studies, all based on U.S. multinationals, have examined the methods employed in the evaluation of subsidiaries. However, none of them was purposely designed to address the environmental issue.

The strategy followed in this study encompassed the formulation of an operational model articulating the main points to be the object of examination. Such a model equates the issues raised in the review of the research theoretical background into an integrated and eminently pragmatic framework. The model can be seen in its two broad levels of analysis. One, defined as the level of description covers not only the formal evaluation and control criteria actually used in MNCs, but also other aspects believed to be important to the understanding of the performance evaluation process. This includes first the organization of the environmental assessment activity in the performance evaluation. Besides, the environmental assessment activity is, per se, an issue vital to any MNC since, by helping to

detect present and future threats and opportunities, it is indispensable to the determination of the strategic direction of a corporation. Other areas covered in the descriptive level of the model are the internal reporting system formally set up between subsidiaries and headquarters, and the informal dimension of performance evaluation. Both these topics are regarded as essential to an adequate comprehension of the evaluation process in MNCs.

The other level of analysis contemplated in the operational model is the level of explanation. This attempts to explore reasons that may justify the use in companies of certain practices and techniques instead of others. It also attempts, ultimately, to determine the characteristics of companies with performance evaluation systems that take more extensive account of the foreign environments.

From the literature reviewed in the study and the articulation of the major research issues in the operational model, a set of hypotheses were formulated. To collect the necessary data to test such hypotheses and also to provide the evidence required for the descriptive side of the study, a questionnaire was developed.

This questionnaire was mailed to each of the 233 corporations that constituted the study's initial survey population, which was selected from among the 500 largest firms in The Times 1000. The criterion for selection specified U.K.-based quoted companies with at least one foreign subsidiary - that is a firm located overseas controlled by the group - involved in an industrial activity, namely manufacturing, assembly, exploration or construction. As in some cases it was not possible to determine the nature of the international involvement of a company, a decision was made to include such cases in the survey population asking for the questionnaire to be returned uncompleted if the company contacted was not eligible for the study. In the end, 23 firms confirmed in writing that they did not have industrial activities abroad, bringing down, therefore, the size of the survey population to 210.

The overall response rate to the survey amounted to 82 percent, this including companies that wrote declining to collaborate in the study.

A total of 101 multinationals participated in the research, however, only 97 questionnaires were usable. Such a degree of participation corresponds to a success rate of 48.1 percent. After concluding the administration of the questionnaire, follow-up interviews with respondents were conducted. Seven personal interviews were made with the purpose of checking once more the accuracy of the questionnaire, and of explaining in-depth aspects of interest to the research.

The data collected was subjected to statistical analysis, mainly following the descriptive operational model and the hypotheses generated a priori. A summary of the most relevant findings identified is presented next.

14.2. Main Findings of the Study

This research generated a number of findings with important implications for both theory and practice. These findings will be reviewed here, following a sequence of presentation that is slightly different from the one adopted in Part II. The objective is to emphasize those conclusions considered of greater consequence for the purpose of the study.

14.2.1. The Organizational Context of the Environmental Assessment Activity

A noteworthy finding of the study is that the great majority of companies practice in headquarters some form of foreign environmental scanning. However, in only a small minority is the activity formally organized. In most cases, in fact, foreign environmental information is collected and analysed simply on an informal basis. A comparison of these results with those of studies on U.S. multinationals reveals that the existence of an institutionalized environmental assessment

function appears to be more widespread among American-based MNCs than among British multinationals.

In those cases where the function is formalized there are one or more professionals in headquarters to whom the tasks of collecting and analysing foreign environmental information were formally assigned. In most of the times such tasks constitute only part of these individuals' responsibilities.

In general, environmental information of an economic, political, legal, social, and cultural nature is collected from a very wide range of sources which complement each other forming a pool of data. Sources internal to the firms, especially company executives, both in subsidiaries and headquarters are prominent. In addition, other preferred sources of information on actual or potential host environments include banks, the media in general, and specialized publications.

The intelligence retrieved in the environmental assessment activity is used as support to a number of decisions and activities. Corporate strategic planning, major capital investments, and disinvestment decisions all use environmental information. Additionally, environmental information was found in many cases to be regularly employed in the control and evaluation of foreign operations, as part of the continuous assessment process of subsidiaries' operating performance.

The study revealed that higher levels of sophistication in the organization of the environmental assessment activity are normally associated with a higher vulnerability of the MNCs to the impact of foreign environments and with larger degrees of variation in the characteristics of the environment to which the companies are subject. In reality, multinationals where the collection and analysis of foreign environmental information is formally institutionalized, and to a smaller extent, companies where the environmental assessment activity is conducted in an informal way, tend to be highly exposed to host country and government influences, practise global integration strategies, exercise a tight strategic control over subsidiaries, and

have high levels of internationalization (i.e. companies operate in a large number of countries and geographic areas).

After this introductory evidence which places the central processing of environmental information in its organizational context, the findings will now turn to the qualities of the performance evaluation systems used for foreign operations.

14.2.2. Environmental Capability of Performance Evaluation and Control Systems

Generally, the study points to the fact that in the great majority of companies the formal assessment criteria used for foreign subsidiaries and their managers are at least moderately capable of taking host country environmental influences into account. In only a small minority of cases do the criteria used seem to be not at all or little effective in that respect. If this result is compared with the scarce evidence available from American studies, a tentative conclusion may be drawn suggesting that the performance evaluation systems used in British multinationals are perhaps more sensitive to the environment than those in operation in U.S. MNCs.

Despite this observation, the study found that in headquarters executives' opinion formal evaluation criteria should reflect environmental influences to a greater extent than they actually do. There is, therefore, a gap between the perceived capability of the evaluation system to recognize important environmental differences among host environments and managers' requirements. Such a gap, seen in conjunction with the fact that headquarters executives generally view their systems as reflecting the environment in a relatively extensive way, indicates that managers' requirements of the degree to which performance evaluation systems should be capable of taking the environment into account are extremely high. This may be interpreted as an indication of the importance of the environmental issue for those who in practice are involved in the evaluation and control of foreign operations.

Managers' beliefs of the extent to which assessment criteria should be capable of recognizing relevant environmental influences, were found to be related to the degree of environmental variability across host nations that is perceived by them. In effect, those headquarters executives who wanted performance evaluation criteria used for subsidiaries and for managers to take extensive account of the environment tended to view the impact of local environments on subsidiaries as varying substantially from one geographic area to another. This indicates that the environmental requirements sought for the evaluation criteria are influenced by managers' perceptions of the way in which the environment differs across overseas operations. And environmental variation is perceived to be particularly high in companies which are established in a wide range of locations spread simultaneously through industrialized regions and areas of the Third World.

The discrepancy between what is offered by performance evaluation systems and what is desired from them, was, furthermore, suggested by the results of a test which used an independent instrument that determined the actual capability of formal evaluation criteria to recognize environmental differences. In reality, the needs of headquarters executives as to the extent to which performance evaluation systems should ideally be able to take the environment into account did not find a correspondence in the attributes actually possessed by the systems.

The capability of formal performance evaluation criteria to take host country environmental influences into account as measured by the independent instrument created in the study was found to vary greatly according to certain characteristics of the MNCs. Companies with a higher commitment to foreign operations (i.e. firms with larger proportions of overseas assets and sales), a higher internationalization level (i.e. firms operating in a larger number of countries), and a higher level of exposure to host country and government influences, employ performance evaluation criteria that tend to be more sensitive to the environment. It is noteworthy that corporations particularly involved in operating overseas, and whose activities can be seriously affected by changes in the conditions of

the international host environments are using methods of subsidiary performance evaluation and control that take more extensive account of the environment.

Moreover, the environmental sensitivity of performance evaluation criteria was also discovered to be associated with the way in which information about foreign environments is collected and analysed in the multinationals' headquarters. Companies with more organized environmental assessment activities show a propensity to employ evaluation systems that are more sensitive to the environment. This suggests that those MNCs to which the monitoring of local environments is sufficiently important to justify the existence of a central environmental assessment activity, also consider it important that their evaluation and control criteria are sensitive to the environment.

A complete understanding of the ways in which a performance evaluation system is capable of taking host environmental conditions into account can only be achieved with a detailed examination of the characteristics of the assessment criteria employed. This is the objective of the next section.

14.2.3. Characteristics of the Formal Evaluation and Control Process

The performance evaluation criteria whose features will be analysed here refer to the methods and techniques employed in the headquarters of MNCs to assess foreign subsidiaries' operating performance. Nevertheless, the study discovered that in the large majority of cases the assessment of the managers responsible for the subsidiaries' operations is based on the same or very similar criteria that are used for the subsidiaries themselves. Therefore, the discussion that follows will also be applicable in most cases to the assessment of managerial performance. This identification of methods used for the two objects of control, although against what is prescribed in theory, is in agreement with findings from other surveys on performance evaluation practices.

An important outcome of the study regarding the characteristics of the performance evaluation criteria actually in use is the confirmation of the vital role played by the internal reporting system operated between foreign subsidiaries and headquarters in the evaluation and control process. The internal reporting system produces a constant flow of information which in the opinion of headquarters executives is more important for the evaluation of foreign subsidiaries and their managers than batteries of individual performance measures and standards normally regarded in the literature as the basic instruments of performance evaluation.

The information included in a company's formal communication channels is composed of different items or reports which are submitted by subsidiaries at varying time intervals. The study suggests that the frequency with which items of information are forwarded to headquarters meets the needs of the users of the information. It was found, in fact, that the reporting frequency of items included in the internal communication system is associated with the degree of usefulness for performance evaluation attributed by headquarters executives to the items reported.

The nature of the information reported via the formal channels is wide ranging and includes items of both a financial and non-financial character. The incidence and reporting frequency of financial items such as balance sheets, profit and loss accounts, reports on borrowings in subsidiaries, cash-flow statements, and segmental sales analyses, are generally much higher than those of non-financial reports (e.g. production output, manufacturing capacity utilization, market share, labour relations). However, in certain MNCs the weight of non-financial information relative to the total volume of information reported by subsidiaries is substantially higher than in others. Companies with an extensive international involvement, that is firms with a large percentage of sales generated and assets located abroad, and firms operating in a vast number of countries in different world geographic areas, tend to include in their reporting systems a higher percentage of non-financial items. Considering that in a multinational context, the use of non-financial information as opposed to purely financial data facilitates the consideration of the

specificity of each subsidiary, it is apparent that corporations which in principle are subject to higher levels of variation in the characteristics of their operating environments are better equipped to consider the individuality of each subsidiary in their decisions.

A finding of noteworthy relevance is the existence among the non-financial items regularly reported via the formal communication channels of reports on local environmental conditions faced by subsidiaries. In the great majority of companies reports on the economic conditions encountered in the host environment are frequently forwarded by subsidiaries to headquarters. On the other hand, formal reports on political, legal and social environmental conditions are frequently forwarded in only a minority of cases. The corporations which have such non-economic environmental reports submitted regularly and at short time intervals tend to be larger in asset size, more committed to foreign operation (i.e. showing a larger proportion of assets abroad), more internationalized (i.e. operating in a larger number of countries and geographic areas), tend to practice some form of global integration of their international industrial activities, and, finally, tend to have a higher level of exposure to host country and government influences. In other words, it is in those multinationals which are subject to a wider variation in environments that environmental reports arguably of a more specialized and sensitive nature are requested more often. This conclusion is consonant with the one reached previously about the the weight of non-financial information in the total internal reporting system. Companies that are in contact with a wider environmental diversity seem to be more technically prepared to comprehend the specificity of each subsidiary as far as the local influences of the environment are concerned.

Furthermore, the sophistication of the internal reporting systems, particularly in terms of the relative weight of non-financial information and the reporting frequency of host country environmental conditions, is related to an organizational issue regarding the environmental assessment activity in the multinationals' headquarters. Companies where environmental information is formally collected and analysed, and to a lesser extent, companies where environmental

information is processed on an informal basis tend to be more selective in the type of information requested from overseas subsidiaries since they show a preference for non-financial information in general and for environmental reports in particular. This suggests that MNCs to which the monitoring of the environment is important enough to justify the setting up of a formal environmental assessment function do operate reporting systems that in principle tend to reflect better host country environmental conditions.

Besides the information regularly included in the internal reporting channels of companies that was just described, managers in headquarters also employ performance measures and standards in the evaluation process. Among the most widely used performance indicators are total income, ROI, return on sales, and cash flow. Interestingly, residual income does not receive in practice the attention that it has deserved from the perspective of the academic literature. In as many as half of the companies surveyed, RI is not used.

As to the standards of performance most frequently employed, targets previously set for operations, and the subsidiaries' past actual results (i.e. standards based on trends from historical data) were encountered in nearly every company. As expected, the setting of targets was found to be essentially linked to the budget. The study revealed the existence of a high degree of participation of subsidiary management in the setting of their units' targets, which indicates that the operating specificity of each subsidiary should, in principle, be reasonably safeguarded in the targets assigned.

However, and in contrast with this conclusion, an analysis of the variability across subsidiaries of performance targets and formal evaluation criteria in general, suggests that companies are not making use of the most appropriate methods for the specificity of each subsidiary to be taken into account in the evaluation process. In effect, the targets assigned to subsidiaries are in the great majority of cases identical in nature for all the foreign operations of a company, only varying extensively in value. Considering that a variation in target nature offers a better method of apprehending the singularities of subsidiaries than a simple change in target value, it

may be concluded that companies although setting standards that allow at least some sensitivity to the particular local conditions are not generally employing the more elaborate techniques at their disposal. A similar conclusion is drawn from the overall formal performance evaluation criteria in operation. While the majority of companies attempt to adjust the criteria to the special conditions encountered in foreign subsidiaries, they do so by simply adapting the relative weight attributed to data, measures and standards to the specific nature of subsidiaries and not by employing different criteria, purpose-built for each operation. Confirming such a relative standardization of the performance evaluation criteria employed is the fact that internal reporting systems operated between foreign subsidiaries and headquarters, seen as the backbone of the information used for performance evaluation, are usually uniform across foreign operations. In the overwhelming majority of cases, reporting requirements, namely number, content, format, and frequency of formal reports, do not change among subsidiaries. Similarly, the characteristics of the reporting systems used for foreign operations were found to be basically the same as those used for domestic divisions or subsidiaries.

Changes of whatever extent in the assessment practices used for different subsidiaries of a multinational are influenced by a number of factors related to the specificity of the subsidiaries. The most influential factor appears to be of an environmental nature since the particular features of the host country environments posing threats and opportunities to a company's foreign operations were considered by headquarters executives as the major reason why variations in performance evaluation criteria were introduced for different subsidiaries. Other important factors, related to the internal characteristics of the subunits, include unsatisfactory performance levels of subsidiaries, their strategic importance for the whole of the multinational operations, and the size of the subsidiaries.

After analysing the formal criteria used by MNCs to assess the performance of their foreign operations, the role of informal information in the performance evaluation process will now be briefly discussed.

14.2.4. The Role of Informal Information in Performance Evaluation and Control

The study confirmed the substantial relevance that information retrieved outside the formal communication network has for the foreign subsidiary evaluation process. High levels of communication through informal channels were encountered between subsidiaries and headquarters, which appears to corroborate suggestions made in the literature that in European MNCs, in contrast to the situation found in U.S. multinationals, informal information used in decision making is abundant.

Informal information is gathered from diverse channels of communication ranging from personal visits by managers, to contacts through the telephone and social meetings. The reasons for the use of informal information are widespread and include the provision of information covering exceptional and unpredicted situations, the need for more data on certain vital issues, and the necessity for prompt information and confidentiality.

A comparison of the perceptions of executives towards formal and informal information indicated that managers rely more on formal than on informal information when evaluating foreign subsidiaries. On the other hand, they rely equally on both types of information when assessing managers. It would appear that the formal assessment criteria are not so trusted when managerial performance comes to be assessed, which is the reason why formal information does not take primacy over informal information.

Finally, a very noteworthy finding is that informal information used in performance evaluation generally complements rather than substitutes formal assessment criteria. In effect, the more comprehensive and elaborate the formal evaluation system the more important informal information is perceived to be. This being so, it does not seem that information is collected through informal channels mainly to overcome the deficiencies of the formal systems but to

enhance their capabilities and strengths. The implication of this finding for theory formulation is that informal information should perhaps be regarded as a welcoming organizational feature instead of an unavoidable waste of resources.

14.3. Limitations of the Study

Any survey study, such as this, is only as good as the data collection instruments used in the field research. Many are the pitfalls in questionnaire design and administration which can detract from the quality of a work. The most common pitfalls have been reviewed in chapter 8 in order that the present study could avoid them. In reality, utmost care was taken with the preparation of the questionnaire and its administration. Formal planning and testing of the questionnaire prior to the mailing of the final version represented an important part of this research project, which claimed a very substantial amount of effort and time. Likewise, the administration of the questionnaire involved a very time consuming stage since all steps were taken in order to define correctly the survey population and to address personally the questionnaire to the right senior executive in each organization. Despite this careful approach to the design and administration of the study's main data collection instrument, remaining weaknesses, always inevitable, are likely to be found. It is hoped, however, that these weaknesses are only minor and in no way compromise the thrust of the findings.

Throughout the testing of hypotheses some variables initially selected as explanatory never produced significant results with companies' practices. This requires some attempt at an explanation, in order to know whether the lack of association reflects the true nature of the phenomena being investigated or, instead, whether they are due to particular difficulties in defining the variables in the most adequate way. The variables in question here are the type of industry and the organizational structure of a MNC. Industry was defined as the

dominant activity of a company's foreign operations. This information is not readily available, and as explained in chapter 9, the companies' annual reports were used as a source. In fact, the latest report available for each firm included in the study was carefully analysed so that the dominant industrial activity outside the United Kingdom could be ascertained. This method presented problems since in a number of cases it was difficult, if at all possible, to extract the information required. Such problems derived mainly either from the lack of disclosure of data or from the very nature of the activities of companies (for example, in conglomerates the international activities of a MNC are typically spread through an even range of different industries). This suggests that the poor results obtained for the tests of association involving the variable industry could be due to the difficulties encountered in classifying companies.

A similar conclusion may be reached for the variable that measures organizational structure. In effect, although utilizing a typology suggested by Channon [1973] which is believed to be particularly suited to the British MNC, the classification of companies according to their structure presents problems. This is not surprising knowing that there have been signs in the literature indicating that structure is generally a poor explanatory variable. A possible explanation for this lies precisely in the difficulties with the correct classification of firms by the different categories of the variable structure. As Daniels, Pitts and Tretter [1984, p.295] observe: **"although structural types may be fairly easily defined, classifying companies according to them is difficult."**

In general, the study was designed with the purpose of achieving an understanding of the ways in which the influence of host country environments on subsidiary performance are taken into account in the evaluation and control process. Therefore, the examination of the performance evaluation criteria in operation in MNCs was made having the environmental issue in mind. However, as it was explained in the operational model presented in chapter 7, the subsidiary central managerial context involving decisions imposed by headquarters on subunits is also likely to shape the performance evaluation system. In effect, the choice of evaluation systems' features may be linked to

such operating decisions that transcend subsidiary management. For example, the relative emphasis on non-financial indicators may have been influenced by the level of transactions among subsidiaries (and consequent use of transfer pricing), since a higher volume of transactions can be assumed to increase the difficulties in assessing subsidiaries on the basis of the profit concept. The subsidiary central managerial context was not investigated for reasons of size manageability of this study. Moreover, as explained in chapter 7, it is believed that a conceptual separation of the central managerial and environmental issues is acceptable. Nevertheless, an interesting development of the present work would be the further exploration of the subsidiary central managerial context in a performance evaluation framework. Suggestions for further research such as this will be presented in the next section.

14.4. Contributions of the Study and Implications for Further Research

This final section discusses some of the major contributions of the study to theory formation and management action. It also presents directions for further research suggested by the survey findings and the literature review.

The study has called attention to the importance of environmental recognition in foreign subsidiary performance evaluation, an issue that is generally absent not only from textbooks but also from leading research in the area. From a theoretical standpoint, the need for the characteristics of host country environments to be taken into account in the performance evaluation process finds its justification in the requirements deemed necessary to the achievement of a fair and competent assessment of subsidiaries and their managers, and also on the level of vulnerability of MNCs to environmental influences. The importance of the environmental issue in performance evaluation was furthermore confirmed by the executives whose task is to evaluate and

control foreign operations. Although the multinationals studied were found to employ evaluation systems that are reasonably capable of taking the host country environments into account, the users of the systems believed in general that the assessment criteria should recognize the environment to an even larger extent. No doubts should thus remain as to the relevance of this issue and additional research must be undertaken in order that a well established body of evidence in the field may be constructed.

In this context, further research could be conducted in order to determine whether the use of more sophisticated evaluation systems, in particular those that are more sensitive to the environment, contribute to higher levels of effectiveness of subsidiaries and indeed of MNCs as a whole. This would constitute an ultimate test of the benefits of environmental recognition in foreign subsidiary performance evaluation, which although difficult to perform would make a valuable contribution to the knowledge in the area. Another suggestion that would enhance the understanding of the environmental issue in performance evaluation consists of exploring the views of the managers in foreign subsidiaries regarding the assessment methods and criteria employed by headquarters. In effect, if an inside view from those who are appraised is added to the evidence provided by the current study a better appreciation of the environmental capability of evaluation systems will be likely to be achieved.

Throughout the reporting of the conclusions and major findings of the study comparisons with the evidence available from other surveys were attempted. This enabled the study to put the practices of British MNCs in perspective with those of U.S.-based multinationals. It was suggested, for example, that the performance evaluation systems in operation in U.K. companies could be more sensitive to the environment than those used by international corporations from the other side of the Atlantic. However, suggestions such as this are not based on comparative research, and this being so they are only originated by certain apparent directions from loosely related studies and not by sound supportive evidence. Indeed, some background information in the literature indicates that European multinationals normally tend to use management processes that differ slightly from those employed by

American MNCs. Egelhoff [1984], for instance, in a study involving U.S., U.K., and Continental European multinationals discovered that patterns of control differ significantly in the three national groups. Specific differences in practices related to the foreign subsidiary performance evaluation process can only be ascertained in comparative studies which include MNCs from different countries. It is, therefore, suggested that the present study be replicated for a cross-sectional sample of multinationals from different countries of origin.

As discussed in the previous section, reasons to use certain performance evaluation practices instead of others may be due to factors related to decisions imposed by headquarters on subsidiaries such as transfer prices, charges for the parent technology and services, and internal borrowing. These factors were included in a broad model of foreign subsidiary performance evaluation and control presented in chapter 7. The model emerged from the convergence of scattered bodies of literature brought together and discussed in Part I of the study. Such a model is seen as an important contribution of this work since it presents what is thought to be a comprehensive framework of relevant issues and variables at work in the performance evaluation process in MNCs. The factors termed in the model as the subsidiary central managerial context were not investigated for the reasons already explained. The exploration of this dimension and its articulation with the environmental issue in performance evaluation is believed to be a fruitful development of the present study.

At a conceptual level it was considered right from the start of the study that informal information could play an important role in foreign subsidiary performance evaluation. The empirical evidence confirmed this by demonstrating the relevance of information collected outside the official communication channels for the monitoring of foreign operations, and especially for the assessment of managers. Moreover, it was discovered that informal information normally complements the formal assessment criteria enhancing the capabilities of the institutionalized evaluation systems. As often mentioned before, these findings were obtained by applying objective techniques of analysis to a phenomenon that is eminently of a subjective nature. Therefore, it seems wise to regard the observations made here of the

role played by informal information as suggestions calling for further exploration. New insights into the use of informal information in performance evaluation are hopefully to be achieved by studying the issue in more detail and by employing a methodology better suited to the nature of the problem. In this particular respect, the case study method seems appropriate.

Finally, the study contributes to the knowledge of the environmental scanning activity practised in British MNCs. It was found that the collection and analysis of foreign environmental information is emerging as an institutionalized function in companies' headquarters. Despite the fact that only a minority of firms have at the moment the environmental assessment activity formally organized, the majority have realized the importance of this issue and already process environmental information on an informal basis. Judging by the evidence provided by a number of studies on the environmental assessment practices of American MNCs, it appears that the formalization of this activity is not yet as widespread in U.K. corporations as it is in U.S. multinationals. Environmental scanning practices do not represent a central issue of the present research. In fact, such practices are only relevant insofar as they generate information that is later used in the foreign subsidiary evaluation process. For this reason the depth of the investigation of the methods followed in the collection and analysis of foreign environmental information had to be curtailed to those strictly necessary for the purposes of the study. It is believed, however, that environmental scanning is an issue of utmost importance to a MNC with relevant implications for company strategy and business policy. Detailed investigation of the environmental scanning practices in British MNCs is, therefore, suggested as an interesting and valuable avenue for research.

To conclude, the several issues raised in the present work are hoped to have contributed to a better understanding of the nature of subsidiary performance evaluation and control in MNCs. In particular, a new dimension was added to the study of multinational performance evaluation, by addressing the problem of the recognition of varying host country environmental influences on subsidiaries' operations. As

shown, this represents a critical element of the foreign subsidiary evaluation process, of special relevance to the growing number of companies that in order to successfully compete in the international markets are forced to adopt organizational processes and strategies that render them particularly vulnerable to unforeseen changes in host country environments.

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APPENDICES

APPENDIX A

QUESTIONNAIRE

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ENVIRONMENTAL ANALYSIS AND
FOREIGN SUBSIDIARY PERFORMANCE EVALUATION

Purpose of the Study

This survey explores the criteria employed by groups' headquarters to evaluate the performance of their subsidiaries and managers operating abroad. More specifically, it seeks to understand the ways in which environmental characteristics (both economic and non-economic) of host countries, which affect subsidiaries operations, are taken into account in the foreign subsidiary performance evaluation and control process.

General Instructions for Participation

1. The present survey is addressed to British-based firms with at least one foreign subsidiary (i.e. a company located overseas which is controlled by the group) engaged in manufacturing, or other industrial activity (assembly, exploration, construction).
2. The questionnaire is to be answered by a company senior executive who is directly involved in the control and evaluation of foreign subsidiaries.
3. All efforts were made to keep the time required to complete the questionnaire down to a minimum. For this reason, alternative answers are already provided for most questions and the respondent is asked to simply tick the box(es) which most accurately describes his/her opinion or the company's practice. Space for comments is generally provided.
4. A number of questions seek to characterize the flow of information reported internally by foreign subsidiaries to headquarters, as well as the use of that information in the control of foreign subsidiaries. If in your company different practices regarding the two aspects above are used for different foreign subsidiaries, please answer questions concerning the typical (i.e. the most common) case in your firm.
5. All the information provided here will be held in strict confidence, and will be presented in aggregate form only. In all circumstances, the anonymity of individual respondents and company names will be carefully protected.
6. Thank you very much for your support of this research project. For any queries concerning this study, please contact:

Mr. M A Marques M.Com.
University of Glasgow
Department of Accountancy
67 Southpark Avenue
Glasgow G12 8LE

Tel.: (041) 339 8855 Extension 501

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General Instructions for Participation

1. The present survey is addressed to British-based firms with at least one foreign subsidiary (i.e. a company located overseas which is controlled by the group) engaged in manufacturing, or other industrial activity (assembly, exploration, construction). If your firm has no subsidiary in these conditions please answer the last question (Section V, question 8.) and return the questionnaire without further completion.
2. The questionnaire is to be answered by a company senior executive who is directly involved in the control and evaluation of foreign subsidiaries.
3. All efforts were made to keep the time required to complete the questionnaire down to a minimum. For this reason, alternative answers are already provided for most questions and the respondent is asked to simply tick the box(es) which most accurately describes his/her opinion or the company's practice. Space for comments is generally provided.
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SECTION I - FOREIGN ENVIRONMENTAL INFORMATION PROCESSED BY GROUP'S HEADQUARTERS

This section deals with the extent to which headquarters (HQ) collect and analyse information about foreign environments peculiar to host countries where companies already operate, or expect to operate. Such information may relate to different aspects, namely economic (e.g. inflation, labour costs), political/legal (e.g. political risk, taxes), and social/cultural (e.g. strikes, attitudes). This section is concerned with the use of environmental information in general, and not exclusively in the context of subsidiary performance evaluation.

How is foreign environmental information collected and analysed in your HQ?

Please tick (✓) one answer.

- (a) There are one or more managers with formal responsibility for collecting and analysing foreign environmental information. ☐ (go to question 2.)
- (b) Foreign environmental information is usually collected and analysed but nobody has formal responsibility for this. ☐ (go to question 4.)
- (c) The collection and analysis of foreign environmental information is not usually carried out, either on a formal or informal basis. ☐ (go to Section II)

Please indicate below the number of people in your firm's HQ who are involved in the formal function of collecting and/or analysing foreign environmental information.

	Full-time	Part-time	Total
Number of people:	<input type="text"/>	<input type="text"/>	<input type="text"/>

Which of the following organisational sub-units in HQ have one or more people formally charged with the task of collecting and/or analysing foreign environmental information?

Please tick (✓) as appropriate.

- | | | |
|--|---|--|
| (a) Finance/Control <input type="checkbox"/> | (d) International division <input type="checkbox"/> | (g) Board of directors <input type="checkbox"/> |
| (b) Planning <input type="checkbox"/> | (e) Product divisions <input type="checkbox"/> | (h) Others- please specify: <input type="text"/> |
| (c) Legal <input type="checkbox"/> | (f) Public affairs <input type="checkbox"/> | <input type="text"/> |

Is the collection and analysis of foreign environmental information in your HQ geared to :

Please tick (✓) one answer.

- | | |
|--|---|
| (a) the assessment of foreign environmental conditions only when your firm is considering new investments ? <input type="checkbox"/> | (c) both ? <input type="checkbox"/> |
| (b) the monitoring of foreign environmental conditions only for existing operations ? <input type="checkbox"/> | (d) other purposes ? (please specify): <input type="text"/> |

Which of the following characteristics of the host countries' environments are generally collected and analysed ? Please rate these by their relative importance, using the following scale :

1 2 3 4 5
 |-----|-----|-----|-----|
 Not important Moderately important Very important

0 = the characteristic is not usually collected and/or analysed.

Please answer in both columns if you answered (c) in the previous question.

- (a) Economic (e.g. inflation and exchange rates, market size, economic growth, etc.)
 (b) Political/Legal (e.g. political risk, exchange and profit remittances controls, taxation, incentives, etc.)
 (c) Social/Cultural (e.g. labour strikes and unrest, general attitudes toward foreign investment, etc.)

New investments	Existing operations

Which of the following sources of foreign environmental information (either statistical or qualitative information) have been regularly used in HQ to collect data about foreign environments ? Please rate these by their relative importance, using the scale as follows :

1 2 3 4 5
 |-----|-----|-----|-----|
 Not important Moderately important Very important

0 = the source has not been regularly used in your firm.

- ☐ (a) Subsidiary managers
☐ (b) Headquarters executives (via, for example, personal visits to locations)
☐ (c) Banks
☐ (d) Other firms
☐ (e) British embassies and local chambers of commerce
☐ (f) British Overseas Trade Board
☐ (g) International organisations (e.g. U.N., O.E.C.D., I.M.F., etc.)
☐ (h) Specialized publications (e.g. reports by B.I., the E.I.U., etc.; indices such as the B.E.R.I., and the P.S.S.I.)
☐ (i) Business periodicals and media in general
☐ (j) Others - please specify: _____

For which HQ decisions or activities has foreign environmental information been used ? Please tick (✓) as appropriate.

- ☐ (a) Capital investment decisions:
 ☐ - initial investments
 ☐ - expansion investments
 ☐ - replacement investments
☐ (b) Disinvestment decisions
☐ (c) Corporate strategic planning
☐ (d) Control and evaluation of existing operations
☐ (e) Others- please specify: _____

If you ticked (d) above, please answer question 8.
 If you did not, please go to section II.

How has the information about foreign environments been used in the control and evaluation of your firm's subsidiaries? (Please tick (✓) one answer)

- ☐ (a) regularly, forming part of the continuous control and evaluation process of foreign subsidiaries' operating performance.
- ☐ (b) only occasionally, when special circumstances either in the company or in the host environments have emerged.

SECTION II - INTERNAL FINANCIAL REPORTING SYSTEMS

This section is concerned with the flow of information reported internally by foreign subsidiaries to headquarters (HQ), through formal (i.e. institutionalised) channels.

Which of the items provided below are included in the formal financial reporting system operated in your firm between foreign subsidiaries and HQ ?

Please tick (✓) columns for the appropriate time interval between consecutive submission by subsidiaries.

I T E M S	I N C L U D E D					NOT INCLUDED
	Only occasionally	Annually	Quarterly	Monthly	Other periods (specify)	
Balance sheet for the period						
Up-date of the budgeted year-end balance sheet.						
Profit and loss account						
Up-date of the year-end profit forecasts						
Cash-flow generated in the subsidiary						
Inventory levels (in quantity)						
Sales per product or business						
Borrowing in the subsidiary from local sources						
Market share in host country						
Production output						
Manufacturing capacity utilization						
Labour relations (e.g. days lost due to industrial action, absenteeism rates)						
Product quality						
Report on economic conditions in host country (e.g. inflation rate, cost of money, credit availability, general state of the Economy)						
Report on political, legal, and social conditions in host country (e.g. political stability, capital transfer regulations, price controls, import-export controls)						
Others - please indicate those you consider of importance (and not specified above) :						

18. Are reporting requirements UNIFORM for all the foreign subsidiaries in your company, in terms of :
Please tick (✓) each alternative.

- (a) number of formal reports required from subsidiaries ?
(b) content of the formal reports ?
(c) format of the formal reports ?
(d) frequency (i.e. the time interval between consecutive submission of a same form) of formal reports ?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

19. If any of your answers above is NO, please indicate briefly the reason(s) why reporting requirements differ among foreign subsidiaries :

20. To what extent does the financial reporting system operating internally between foreign subsidiaries and HQ differ from that operating between domestic divisions and HQ ?

Please tick (✓) one answer.

- (a) No difference (the same system is used) ☐ (c) Substantial difference (systems differ in major aspects) ☐
(b) Little difference (basically the same system with minor modifications) ☐ (d) There is no formal financial reporting system operating between domestic divisions and HQ ☐

21. If your answer is (c), please indicate the main differences in the space below:

SECTION III - THE USE OF INFORMATION PROVIDED BY FINANCIAL REPORTING SYSTEMS FOR FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL

This section deals with the criteria used by HQ in the evaluation and short-term control of foreign subsidiaries' operating performance. Information reported by subsidiaries through formal channels (i.e. via the internal financial reporting system) is regarded here as the input for the performance evaluation and control process.

NOTE: Some companies might employ different criteria to assess the performance of foreign subsidiary operations and the performance of foreign subsidiary managers. If this is your case, please note that this SECTION is concerned with the former (evaluation and control of subsidiary operations), unless indicated otherwise.

1. How useful is each of the items included in your company's formal financial reporting system in controlling and evaluating foreign subsidiaries' operating performance ?

Please use the following scale: (use 0 if the item is not included in your reporting system)

1 2 3 4 5
|-----|-----|-----|-----|
Not useful Moderately useful Very useful

- | | |
|--------------------------|--|
| <input type="checkbox"/> | (a) Balance sheet |
| <input type="checkbox"/> | (b) Up-date of the budgeted year-end balance sheet |
| <input type="checkbox"/> | (c) P/L account |
| <input type="checkbox"/> | (d) Up-date of the year-end profit forecasts |
| <input type="checkbox"/> | (e) Cash flow |
| <input type="checkbox"/> | (f) Inventory levels (in quantity) |
| <input type="checkbox"/> | (g) Sales perproduct or business |
| <input type="checkbox"/> | (h) Borrowings in the subsidiary |
| <input type="checkbox"/> | (i) Market share |

- | | |
|--------------------------|---|
| <input type="checkbox"/> | (j) Production output |
| <input type="checkbox"/> | (k) Manufacturing capacity utilization |
| <input type="checkbox"/> | (l) Labour relations |
| <input type="checkbox"/> | (m) Product quality |
| <input type="checkbox"/> | (n) Report on economic conditions |
| <input type="checkbox"/> | (o) Report on political, legal, and social conditions |
| <input type="checkbox"/> | (p) Others - please specify: _____ |

10. Do HQ regularly control and assess the operating performance of foreign subsidiaries on the basis of the following profit-based financial measures ? Please tick (✓) each alternative.

	Yes	No
(a) Return on investment - ROI (i.e. a ratio of income to assets)	<input type="checkbox"/>	<input type="checkbox"/>
(b) Return on equity	<input type="checkbox"/>	<input type="checkbox"/>
(c) Return on sales	<input type="checkbox"/>	<input type="checkbox"/>
(d) Residual income (i.e. the profit or loss after interest charges based on subsidiaries' assets)	<input type="checkbox"/>	<input type="checkbox"/>
(e) Total income (i.e. the total amount of profit or loss for the period)	<input type="checkbox"/>	<input type="checkbox"/>
(f) Budget :		
Compared to actual ROI	<input type="checkbox"/>	<input type="checkbox"/>
Compared to actual total income	<input type="checkbox"/>	<input type="checkbox"/>
(g) Other <u>profit-based financial measures</u> - please specify: _____		

11. Do HQ regularly control and assess the operating performance of foreign subsidiaries on the basis of any non-profit-based financial measures (e.g. cash-flows, costs, orders, sales ratios, remittances, etc.) ?

Yes ☐

No ☐

If Yes, please list some major measures used :

12. Which of the financial measures (both profit- and non-profit-based) that are used by your firm in the evaluation and control of foreign operations are thought to provide better indicators of subsidiary operating performance ?

Please refer to your answers given in the previous question (a. and b.), and list by order of importance (1=the most important; 2=the next most important, etc.)

1 _____
 2 _____
 3 _____
 4 _____

5 _____
 6 _____
 7 _____
 8 _____

13. How important is each of the following as a source of information for the evaluation and control of foreign subsidiary operating performance ?

Please tick (✓) one cell in both.

- (a) The internal financial reporting system taken as a global package of information on subsidiaries operations.
- (b) The purely financial measures indicated in question 3. above taken independently of the internal financial reporting system.

1 V. Low	2	3 Moderate	4	5 V. High
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Does HQ systematically use any information in the performance evaluation and control process reported by subsidiaries through formal channels but NOT INCLUDED in the internal financial reporting system (e.g. reported through the marketing information system, if any, etc.) ?

Yes ☐

No ☐

Not applicable ☐

4. If Yes, please give some examples of the type of information in question and the respective channels through which it is reported :

5. Which of the following standards are used in your firm to evaluate foreign subsidiary operating performance ?

Please rate these by their relative importance, using the scale as follows:

1 2 3 4 5
|-----|-----|-----|-----|
Not important Moderately important Very important

0 = the standard is not used in your firm

- ☐ (a) A specific performance target previously set for the subsidiary
- ☐ (b) The past actual results of the subsidiary (e.g. trends based on historical data)
- ☐ (c) The results of similar firms in the host country where the subsidiary operates
- ☐ (d) The results of other similar subsidiaries of your firm, operating in the same host country
- ☐ (e) The results of other similar subsidiaries of your firm, operating in different host countries
- ☐ (f) The results of other similar subsidiaries of your firm, operating in the U.K.
- ☐ (g) Others - please specify: _____

If performance targets set for subsidiaries ((a) in the previous question) are not used in your company, please go to question 8.

6. If performance targets are used in your firm, who prepares and approves the foreign subsidiaries' performance targets ? (Please tick (✓) one answer)

- ☐ (a) Subsidiary managers select and set their own performance targets without consulting HQ.
- ☐ (b) Subsidiary managers select the performance target, and submit it to HQ for approval. HQ usually accepts proposed targets.
- ☐ (c) HQ and subsidiary managers collectively assess alternative performance targets and attempt to reach consensus. The target that has the support of both is the one that is set.
- ☐ (d) HQ managers select the performance target, and submit it to the subsidiary managers for ideas and suggestions. HQ managers then make the decision.
- ☐ (e) HQ managers select and set the subsidiary performance target without consulting subsidiary managers.

7. How are the foreign subsidiaries' performance targets determined ?

- ☐ (a) On the basis of the subsidiary budget.
- ☐ (b) On the basis of the company's overall objectives, with no explicit reference to the subsidiary budget.
- ☐ (c) By management judgement (either at HQ or subsidiaries), with no explicit reference to company's objectives or the subsidiary budget.
- ☐ (d) Other - please specify: _____

10. To what extent do subsidiary performance targets vary across foreign operations in your firm ?
Please tick (✓) one cell in both scales.

(a) The nature of the targets varies (e.g. ROI for some subsidiaries, market share for others, cash flow for others):

1	2	3	4	5
very little	to a moderate extent			very extensively

(b) The value of the targets varies (e.g. 18% of ROI for some subsidiaries, 10% of ROI for others):

1	2	3	4	5
very little	to a moderate extent			very extensively

11. If your answer to either one above is 3 or greater, please describe briefly what are the main reasons for such variation in:

(a) the nature of the targets:

(b) the value of the targets:

12. Do HQ regularly use the same formal criteria (i.e. items in the financial reporting system, performance measures and standards) to control and evaluate the operating performance of ALL your company's foreign subsidiaries ? (Please tick (✓) one)

- (a) Yes (the same criteria with the same weights) ☐ (go to question 10.)
 (b) Yes (the same criteria but with different weights) ☐ (go to question 9.)
 (c) No ☐ (go to question 9.)

13. Please indicate how much influence each of the factors listed below had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries . Please tick (✓), using the scale as follows:

1	2	3	4	5
Minor influence	Moderate			Major influence

0 = not applicable (if the factor does not vary across foreign operations in your firm).

	0	1	2	3	4	5
Geographic location of subsidiary (e.g. Europe, Latin America, Asia, etc.)						
Particular characteristics of the host environment, posing special threats and/or opportunities to subsidiary						
Size of subsidiary						
Strategic importance of subsidiary for the company as a whole						
Unsatisfactory performance level of subsidiary						
Type of responsibility assigned to subsidiary (i.e. subsidiary as a profit-centre vs. subsidiary as a cost-centre)						
Ownership share in subsidiary (i.e. wholly owned vs. partly owned subsidiaries or joint ventures)						
Dominant managerial function in subsidiary (e.g. marketing-oriented subsidiary vs. production-oriented subsidiary)						
Others - please specify:						

10. In general, to what extent do the formal criteria (i.e. items in the financial reporting system, performance measures and standards) used to control and evaluate the operating performance of foreign subsidiaries differ from the criteria used for domestic subsidiaries ?
Please tick (✓) one answer.

- (a) No difference (the same criteria are used) ☐
- (b) Little difference (only in some minor aspects the criteria differ) ☐
- (c) Substantial difference (the criteria differ in major aspects) ☐

b. If your answer is (c), please mention the main differences in the space below. Also, would you please indicate briefly which are the basic reasons preventing the use of identical evaluation criteria :

11. This question refers specifically to criteria used by HQ to assess the performance of foreign subsidiary MANAGERS.

a. In general, is the formal assessment of foreign subsidiary managers based on information provided by the financial reporting system operated between subsidiaries and HQ ?

Yes ☐ No ☐ Not applicable (i.e. there is no formal assessment by HQ of managerial performance) ☐

If not applicable, please go to question 12.

b. If NO, please describe briefly how the assessment of managerial performance is undertaken, and what kind of information is basically used :

c. If YES, how do the formal criteria (i.e. items in the financial reporting system, performance measures and standards) used to assess the performance of foreign subsidiary managers compare to the criteria used to evaluate the performance of foreign subsidiary operations ?

Please tick (✓) one answer.

- (a) The same (managerial performance is totally identified with subsidiary performance) ☐ (c) Significantly different ☐
- (b) Little different ☐ (d) Entirely different (totally separate criteria are used) ☐

d. If your answer above is (c) or (d), please describe briefly the aspects in which managerial evaluation is different from subsidiary evaluation :

12. Below are listed several environmental factors that may have an impact upon subsidiaries' activities, and whose relevance may vary from one geographic area to another. Please indicate for each geographic area where your company operates, up to eight environmental factors which in your opinion exert high influence on subsidiaries' operating performance. Please rank by order (1=the most influential; 2=the next most influential; etc.) down the column.

	Europe	US and Canada	Latin America	Africa	Middle East	Asia	Australia & N.Zeal.
Political stability							
Labour strikes and social unrest							
Attitude toward achievement and work							
General attitude toward foreign companies							
Language, religion, and other cultural factors							
Economic growth/stagnation							
Taxation							
Availability of infra-structures (e.g. communications, transportation, housing)							
Availability of cash/capital							
Restrictions on movements of capital across borders							
Import-export controls							
Price and other Governmental controls							
Legal structures in terms of business law and labour law							
Inflation rates							
Exchange rates							
Market size							
Cost of production inputs							
Others - please specify:							

13. In general, how EFFECTIVE are your company's FORMAL performance evaluation criteria (i.e. items in the financial reporting system, performance measures and standards) in taking account of significant foreign environmental factors?

Please tick (✓) one cell in both scales.

- (a) in the control and evaluation of subsidiaries:

1	2	3	4	5
not at all effective		moderately effective		most effective

- (b) in the evaluation of subsidiary managers:

1	2	3	4	5
not at all effective		moderately effective		most effective

14. Please indicate below some significant environmental factors which in your opinion are NOT adequately taken into account by the FORMAL performance evaluation criteria used in the evaluation of foreign subsidiaries and managers :

15. In your personal opinion, to what extent SHOULD formal performance evaluation criteria (i.e. items in the financial reporting system, performance measures and standards) be able to take account of significant foreign environmental factors ?

Please tick (✓) one cell in both scales.

- (a) in the control and evaluation of subsidiaries:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
not at all	to a moderate extent		to a great extent	

- (b) in the evaluation of subsidiary managers:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
not at all	to a moderate extent		to a great extent	

SECTION IV - THE USE OF INFORMAL INFORMATION FOR FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL

Information about foreign subsidiaries' operations collected through informal channels seems to play an important role in the performance evaluation and control process. The following questions seek to explore this dimension.

1. Would you please list in the space provided some of the informal communication channels most frequently used by HQ managers in your firm to gather information about subsidiaries' operations and their managers (examples : personal visits to subsidiaries, telephone conversations with subsidiary personnel, social meetings, etc.) :
2. Please indicate below the relative importance given by HQ management to formal reports and information collected via informal channels, for the purpose of :
- Please tick (✓) the appropriate boxes.

- (a) evaluation and control of foreign subsidiaries:

	1 Very low	2	3 Moderate	4	5 Very high
Information via formal channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information via informal channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (b) evaluation of foreign subsidiaries' managers:

	1 Very low	2	3 Moderate	4	5 Very high
Information via formal channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information via informal channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. To what extent is FOREIGN ENVIRONMENTAL information obtained through informal channels, for the purpose of : (Please tick (✓) the appropriate boxes)

(a) evaluation and control of foreign subsidiaries:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
not at all	to a moderate extent			very extensively

(b) evaluation of foreign subsidiaries' managers:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
not at all	to a moderate extent			very extensively

5. If any of your answers above is 3 or greater, please give some examples of the kind of foreign environmental information HQ managers tend to collect informally :

6. Below are listed several statements about the purpose and nature of the information used for performance evaluation and control purposes, collected through informal channels. Please give your opinion on each of the statements by ticking (✓) the appropriate boxes. Your answers should refer to the situation encountered in your company's HQ as far as the use of informal information for performance evaluation is concerned.

	Evaluation of foreign subsidiaries		Evaluation of managers	
	Agree	Disagree	Agree	Disagree
(a) Informal information tends to replace information reported via the formal channels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Informal information tends to supplement information reported via the formal channels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) The frequency of informal communication between subsidiaries and HQ is generally high.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Informal information is mainly concerned with non-routine matters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) An important purpose of informal information is to confirm information reported via the formal channels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) An important purpose of informal information is to anticipate information that is subsequently reported via the formal channels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) An important purpose of informal information is to compensate for the rigidity and insufficiencies of the information reported via the formal channels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Please tick (✓) the main reason(s) for the use by HQ of information collected through informal channels for performance evaluation and control purposes. It is to satisfy the need for :

(a) a higher volume of information on vital issues	<input type="checkbox"/>	(e) more reliable information	<input type="checkbox"/>
(b) information covering exceptional and unpredictable situations	<input type="checkbox"/>	(f) more accurate (i.e. precise information)	<input type="checkbox"/>
(c) confidential information	<input type="checkbox"/>	(g) more understandable and useful information	<input type="checkbox"/>
(d) more timely information	<input type="checkbox"/>	(h) others - please specify: _____	

SECTION V - GENERAL INFORMATION

1. Please indicate below the number of countries in each geographic area where your company maintains control over manufacturing (or other industrial) operations.

	Number of countries		Number of countries
(a) Europe (excl.UK)		(d) Africa	
(b) U.S. and Canada		(e) Middle East	
(c) Latin America		(f) Asia	
		(g) Australia and New Zealand	

2. When did your company establish its first manufacturing (or other industrial) operation outside the U.K. ? (Please tick (✓) one answer)

(a) Before 1900	<input type="checkbox"/>	(d) During the 1960s	<input type="checkbox"/>
(b) Between 1900 and World War II	<input type="checkbox"/>	(e) During the 1970s - early	<input type="checkbox"/>
(c) Between World War II and 1960	<input type="checkbox"/>	- late	<input type="checkbox"/>
		(f) In the 1980s	<input type="checkbox"/>

3. How is your company structurally organised ? (Please tick (✓) one answer)

(a) Holding company structure (the company is organised by its different subsidiaries, each operating independently of headquarters' policy-making)	<input type="checkbox"/>
(b) Functional structure (company-wide organisation by major functional areas : finance, marketing, etc.)	<input type="checkbox"/>
(c) Multidivisional structure :	
- Company-wide organisation by product	<input type="checkbox"/>
- Company-wide organisation by geographic area	<input type="checkbox"/>
- Organised by product in the domestic market and by geographic area in overseas markets	<input type="checkbox"/>
- Organised by international division for overseas operations	<input type="checkbox"/>
- Matrix or grid structure (company-wide organisation by product and geography simultaneously; involves shared responsibility across divisions)	<input type="checkbox"/>
(d) Other. Please describe briefly:	

4. How do you classify the degree of control exercised by HQ over foreign subsidiaries, as far as policy and strategic decisions are concerned (e.g. decisions involving definition of key products in subsidiaries, allocation of resources, expansion and diversification of subsidiary operations, etc.) ? (Please tick (✓) one cell)

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
loose		moderate		tight

5. Which of the following strategies is followed by your company in the organisation of its international manufacturing (or other industrial) activity ? (Please tick (✓) one answer)

(a) A global integration strategy - manufacturing is integrated on a worldwide or regional (e.g. EEC) basis, with substantial volume of components, semi finished, and/or finished products moving between plants located in different countries. ☐

(b) A segmented nation-for-nation strategy - manufacturing is based on local plants, substantially independent of each other. The volume of intersubsidiary transfers is low. ☐

(c) A mixture of both :
- with a higher propensity to a global integration strategy. ☐
- with a higher propensity to a segmented nation-for-nation strategy. ☐

6. There are firms whose products being of strategic importance to most host countries are particularly exposed to local government influence in their foreign subsidiaries. The same may happen when firms have as their major international costumers national governments or state owned enterprises.

What is, in your opinion, the degree of exposure of your company to host country and government influence in foreign operations ? (Please tick (✓) one cell)

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
low		medium		high

7. What is the proportion of total assets located outside the U.K. to total company assets ?
Please base your answer on the figures for the latest fiscal year.

☐ % of our company's total assets are located overseas.

8. Please indicate your name, title, and company name below. A copy of the results of the study will be sent to you.

Name: _____
Title: _____
Company name: _____

There may be aspects of this topic that you think are important and the questionnaire does not cover. If you have any further comments, please use the space below.

THANK YOU VERY MUCH FOR YOUR COOPERATION - IT IS MUCH APPRECIATED.

Again, all information will be treated as **STRICTLY CONFIDENTIAL.**

Comments:

APPENDIX B

LETTERS CONCERNING THE MAILING OF THE QUESTIONNAIRE

B.I - Covering Letters Sent to All Companies in the Survey Population

&NAME&
&TITLE&
&COMPANYNAME&
&ADDRES1&
&ADDRES2&
&ADDRES3/O&
&ADDRES4/O&

Dear &FINANCEDIRECTOR&

The research project which I am presently carrying out aims at gaining a better understanding of the relevant criteria employed by headquarters to control and evaluate the performance of their overseas operations and managers. Eventually, it is hoped to make suggestions for improvements to current practice.

The study includes a survey of companies' practices and a questionnaire is being mailed to a large number of international firms. The cooperation of experienced members of the business community is, therefore, vital for the successful completion of this research project. Accordingly, I would greatly appreciate your firm's participation in the survey.

I would be most grateful if you could spend a few minutes to complete the enclosed questionnaire or pass it on to the most appropriate person in your organisation for completion. A stamped and addressed envelope is enclosed.

When the research is completed, a detailed summary of its findings will be sent to each participant. It will hopefully be of interest to you in the formulation of policy decisions in this area.

All information about your firm will, of course, be treated with strict confidentiality. The results of the study will be presented as aggregate data only, not as individual responses.

Thank you in advance for your interest and cooperation. Your assistance will be very much appreciated.

Yours sincerely.

M A Marques M.Com.

&NAME&
&TITLE&
&COMPANYNAME&
&ADDRES1&
&ADDRES2&
&ADDRES3/O&
&ADDRES4/O&

Dear &FINANCEDIRECTOR&

I have pleasure in inviting you to participate in a research project concerned with the performance evaluation of foreign subsidiaries, with special reference to the relevance of local environmental factors, which is being conducted in the University of Glasgow by Mr M Marques. It is hoped that the results of the study will provide a valuable contribution to our understanding of practice in this area. In order for the results to be valid, however, it is extremely important that a large number of firms participate in the survey. Accordingly, I would be most grateful if you, or one of your colleagues would find time to participate in the project. If you have any queries please let me or Mr Marques know. A copy of the study will be mailed to you just as soon as the work is completed.

Many thanks for your support.

Yours sincerely,

S J Gray
Professor of Accountancy

B.II - Second Request Letter

&NAME&
&TITLE&
&COMPANYNAME&
&ADDRES1&
&ADDRES2&
&ADDRES3/O&
&ADDRES4/O&

Dear &FINANCEDIRECTOR&

Four weeks ago Professor Gray and I wrote inviting you to participate in a research project which is being conducted in this University on the subject of foreign subsidiary performance evaluation and control. We have not heard from you since, so I am writing to reaffirm our interest in your participation in the study. The cooperation of a large number of experienced members of the business community is absolutely vital for the achievement of valid and meaningful results.

Please find enclosed another copy of the questionnaire sent to you earlier. I would be most grateful if you or one of your colleagues could spend a few minutes to complete it.

I would like to emphasize that all the information provided will be kept strictly confidential. The results of the survey will be reported in aggregate only.

When the research is completed, a copy of its findings will be sent to each participant. It will hopefully be of interest to you in the formulation of policy decisions in this area.

I will be most grateful for your interest and support.

Yours sincerely,

M.A. Marques

B.III - Third Request Letter

&NAME&
&TITLE&
&COMPANYNAME&
&ADDRES1&
&ADDRES2&
&ADDRES3/O&
&ADDRES4/O&

Dear &FINANCEDIRECTOR&

This is a second reminder of a letter that Professor Gray and I wrote on the 3rd August inviting you to participate in a research project on foreign subsidiary performance evaluation and control. As we have not heard from you yet, I am writing to say that we are still very interested in your participation.

A substantial number of companies have already completed and returned the questionnaire on which this research is based. Further participation is still needed, however, in order to achieve valid and meaningful results.

Would you be kind enough as to complete and return the enclosed questionnaire? I would be most grateful if you or one of your colleagues could spend some minutes to complete it.

Once again, I guarantee absolute confidentiality for all information about your company. The results of the survey will be reported in aggregate only.

When the research is completed, a copy of the findings will be sent to each participant.

I will be most grateful for your interest and cooperation.

Yours sincerely,

M.A. Marques

B.IV - Acknowledgement Letter

&NAME&
&TITLE&
&COMPANYNAME&
&ADDRESS1&
&ADDRESS2&
&ADDRESS3/O&
&ADDRESS4/O&

Dear &FINANCEDIRECTOR&

Thank you very much for completing and returning the questionnaire on foreign subsidiary performance evaluation and control. Your cooperation, together with that of others, is a vital contribution. Without this the research project I am undertaking could never hope to achieve valid and meaningful results.

I trust that the findings of the study will prove to be of interest to you. It is hoped to produce the final report by mid-1984. Once again, thank you very much for your support.

Yours sincerely,

M.A. Marques

APPENDIX C

QUESTIONNAIRE VARIABLES WITH RESPECTIVE LABELS AND RANGE OF VALUES

COCODE

(Company code - number of company in data file)

Real positive number

REQUEST

(Questionnaire request number)

- | | |
|--|--|
| 1 Questionnaire received after first request | 2 Quest. received after second request |
| 3 Questionnaire received after third request | 4 Quest. received during pilot-study |

SECTION I - FOREIGN ENVIRONMENTAL INFORMATION PROCESSED BY GROUP'S HEADQUARTERS**ENFCN**

(Environmental Function - How foreign environmental information is collected and analysed in HQ)

- 1 (a) There are one or more managers with formal responsibility for collecting and analysing foreign environmental information.
- 2 (b) Foreign environmental information is usually collected and analysed but nobody has formal responsibility for this.
- 3 (c) The collection and analysis of foreign environmental information is not usually carried out, either on a formal or informal basis.
- 99 Not determined.

FPEOPLE

(Number of people in HQ who are involved in the formal function of collecting and/or analysing foreign environmental information on a full-time basis)

Real positive number

99 Not determined

999 Not applicable

PPEOPLE

(Number of people in HQ who are involved in the formal function of collecting and/or analysing foreign environmental information on a part-time basis)

- idem -

TPEOPLE

(Total number of people in HQ who are involved in the formal function of collecting and/or analysing foreign environmental information either on a full-time or on a part-time basis.)

- idem -

Organizational subunits in HQ which have one or more people formally charged with the task of collecting and/or analysing foreign environmental information :

ENORGM1

(Finance/Control)

1 Yes

2 No

99 Not determined

999 Not applicable

ENORGM2

(Planning)

- idem -

ENORGM3

(Legal)

- idem -

ENORGM4

(International division)

- idem -

ENORGM5

(Product divisions)

- idem -

ENORGM6

(Public affairs)

- idem -

ENORGM7

(Board of directors)

- idem -

ENORGM8

(Other organizational subunits)

- idem -

ENOBJECT

(The collection and analysis of foreign environmental information in HQ is geared to :)

1 (a) the assessment of foreign environmental conditions only when the firm is considering new investments.

3 (c) both.

2 (b) the monitoring of foreign environmental conditions only for existing operations.

4 (d) other purposes

99 Not determined

999 Not applicable

ECNW

(Economic characteristics of the host countries' environments are generally collected and analysed for new investments)

1 2 3 4 5
 |-----|-----|-----|-----|
 Not important Moderately important Very important

0 = the characteristic is not usually collected and/or analysed.

99 Not determined

999 Not applicable

ECEX

(Economic characteristics of the host countries' environments are generally collected and analysed for existing operations)

- idem -

POLEGNW

(Political/Legal characteristics of the host countries' environments are generally collected and analysed for new investments)

- idem -

POLEGEX

(Political/Legal characteristics of the host countries' environments are generally collected and analysed for existing operations)

- idem -

SOCULNW

(Social/Cultural characteristics of the host countries' environments are generally collected and analysed for new investments)

- idem -

SOCULEX

(Social/Cultural characteristics of the host countries' environments are generally collected and analysed for existing operations)

- idem -

SOURSBY

(Subsidiary managers as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

1 2 3 4 5
 |-----|-----|-----|-----|
 Not important Moderately important Very important

0 = the source has not been regularly used in your firm.

99 Not determined

999 Not applicable

SOURHQ

(Headquarters executives as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURBNK

(Banks as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURFIRM

(Other firms as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURCEMB

(British embassies and local chambers of commerce as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURBOTB

(British Overseas Trade Board as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURORG

(International organizations (e.g. U.N., O.E.C.D., I.M.F., etc.) as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURPUBL

(Specialized publications (e.g. reports by B.I., the E.I.U., etc.; indices such as the B.E.R.I., and the P.S.S.I.) as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOURMED

(Business periodicals and media in general as a source of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

SOUROTH

(Other sources of foreign environmental information (either statistical or qualitative information) regularly used in HQ to collect data about foreign environments)

- idem -

EQ decisions or activities for which foreign environmental information has been used :

ENUSEM1

(Foreign environmental information has been used for capital investment decisions regarding initial investments)

1 Yes

2 No

99 Not determined

999 Not applicable

ENUSEM2

(Foreign environmental information has been used for capital investment decisions regarding expansion investments)

- idem -

ENUSEM3

(Foreign environmental information has been used for capital investment decisions regarding replacement investments)

- idem -

ENUSEM4

(Foreign environmental information has been used for disinvestment decisions)

- idem -

ENUSEM5

(Foreign environmental information has been used for corporate strategic planning)

- idem -

ENUSEM6

(Foreign environmental information has been used for control and evaluation of existing operations)

- idem -

ENUSEM7

(Foreign environmental information has been used for other purposes)

- idem -

ENUSECTL

(How the information about foreign environments has been used in the control and evaluation of the firm's subsidiaries)

1 (a) regularly, forming part of the continuous control and evaluation process of foreign subsidiaries' operating performance.

2 (b) only occasionally, when special circumstances either in the company or in the host environments have emerged.

99 Not determined

999 Not applicable

SECTION II - INTERNAL FINANCIAL REPORTING SYSTEMS**BS**

(Balance sheet for the period - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

I N C L U D E D							
0	1	2	3	4	5	6	7
NOT	Only	Annually	Half Yearly	Quarterly	Monthly	Weekly	Other
INCLUDED	occasionally						periods

99 Not determined

999 Not applicable

BSUPDT

(Up-date of the budgeted year-end balance sheet - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

PL

(Profit and loss account - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

PLUPDT

(Up-date of the year-end profit forecasts - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

CF

(Cash-flow generated in the subsidiary - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

INV

(Inventory levels (in quantity) - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

SALES

(Sales per product or business - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

BORROW

(Borrowing in the subsidiary from local sources - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

MARKT

(Market share in host country - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

OUTPUT	- idem -	(Production output - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
MANUFUT	- idem -	(Manufacturing capacity utilization - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
LABREL	- idem -	(Labour relations (e.g. days lost due to industrial action, absenteeism rates) - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
QUALY	- idem -	(Product quality - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
ECOND	- idem -	(Report on economic conditions in host country (e.g. inflation rate, cost of money, credit availability, general state of the Economy) - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
PLSCOND	- idem -	(Report on political, legal, and social conditions in host country (e.g. political stability, capital transfer regulations, price controls, import-export controls) - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
EMPLOY	- idem -	(Number of employees - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
KEXP	- idem -	(Capital expenditure - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
ORDERS	- idem -	(Orders received - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
CRPOLY	- idem -	(Credit policy (company debtors) - item in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)
RSOTH	- idem -	(Other items in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ)

- idem -

REQNO

(Uniformity in number of formal reports required from foreign subsidiaries)

- 1 Yes
 2 No
 99 Not determined
 999 Not applicable

REQCONT

(Uniformity in content of the formal reports required from foreign subsidiaries)

- idem -

REQFORM

(Uniformity in format of the formal reports required from foreign subsidiaries)

- idem -

REQFREQ

(Uniformity in frequency (i.e. the time interval between consecutive submission of a same form) of formal reports required from foreign subsidiaries)

- idem -

FORVDOM

(Extent to which the financial reporting system operating internally between foreign subsidiaries and HQ differ from that operating between domestic divisions and HQ)

- | | |
|---|---|
| 1 (a) No difference (the same system is used) | 3 (c) Substantial difference (systems differ in <u>major</u> aspects) |
| 2 (b) Little difference (basically the same system with <u>minor</u> modifications) | 999 (d) There is no formal financial reporting system operating between domestic divisions and HQ |
| 99 Not determined | |

SECTION III - THE USE OF INFORMATION PROVIDED BY FINANCIAL REPORTING SYSTEMS FOR FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL

EBS

(Balance sheet for the period - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

1	2	3	4	5
-----	-----	-----	-----	
Not useful		Moderately useful		Very useful

99 Not determined

999 Not applicable (Rated 0 in the questionnaire, i.e. the item is not included in the company's formal financial reporting system)

EBSUPDT

(Up-date of the budgeted year-end balance sheet - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EPL

(Profit and loss account - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EPLUPDT

(Up-date of the year-end profit forecasts - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

ECF

(Cash-flow generated in the subsidiary - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EINV

(Inventory levels (in quantity) - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

ESALES

(Sales per product or business - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EBORROW

(Borrowing in the subsidiary - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EMARKT

(Market share in host country - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EOUTPUT

(Production output - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EMANUFUT

(Manufacturing capacity utilization - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

ELABREL

(Labour relations (e.g. days lost due to industrial action, absenteeism rates) - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EQUAL Y

(Product quality - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

ECOND

(Report on economic conditions in host country (e.g. inflation rate, cost of money, credit availability, general state of the Economy) - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EPLSCOND

(Report on political, legal, and social conditions in host country (e.g. political stability, capital transfer regulations, price controls, import-export controls) - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EMPLOY

(Number of employees - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EKEXP

(Capital expenditure - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

EORDERS

(Orders received - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

ECRPOLY

(Credit policy (company debtors) - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

ERSOTH

(Other items in the formal financial reporting system operated in the firm between foreign subsidiaries and HQ - usefulness of item in controlling and evaluating foreign subsidiaries' operating performance)

- idem -

NPMEAS

(Regular assessment and control of the operating performance of foreign subsidiaries on the basis of non-profit-based financial measures (e.g. cash-flows, costs, orders, sales ratios, remittances, etc.)

1 Yes

2 No

99 Not determined

IROI

(Return on investment (i.e. a ratio of income to assets) - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- | | |
|--|--|
| 1 The most important | 6 The sixth most important |
| 2 The second most important | 7 The seventh most important |
| 3 The third most important | 8 The eighth most important |
| 4 The fourth most important | 9 Item indicated as important but not assigned an order of importance (items ticked "Yes" in question 2a. and not listed in question 3. + items included in question 2b. and not listed in 3.) |
| 5 The fifth most important | |
| 99 Not determined | |
| 999 Not applicable (items ticked "No" in question 2a. + items not indicated in question 2b.) | |

IROE

(Return on equity - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

IROS

(Return on sales - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

IRI

(Residual income (i.e. the profit or loss after interest charges based on subsidiaries' assets) - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

IINC

(Total income (i.e. the total amount of profit or loss for the period) - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

IBUDGROI

(Budget compared to actual ROI - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

IBUDGINC

(Budget compared to actual total income - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

IPMOTH

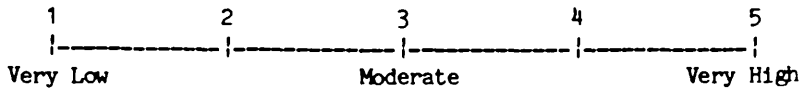
(Other profit measures - importance of financial measure (profit-based) as an indicator of foreign subsidiary operating performance)

- idem -

ICF	(Cash-flow - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
ICOSTS	(Costs - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
IORDERS	(Orders - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
ISALES	(Sales - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
IREMIT	(Remittances - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
IWC	(Working capital - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
ISTOCK	(Stock ratios - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
IDEBTOR	(Debtors - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
IGEAR	(Gearing - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -
INPMOTH	(Other non-profit-measures - importance of financial measure (non-profit-based) as an indicator of foreign subsidiary operating performance)
	- idem -

PACKAGE

(Importance of the internal financial reporting system taken as a global package of information on subsidiaries operations, as a source of information for the evaluation and control of foreign subsidiary operating performance).



99 Not determined

PURMEAS

(Importance of the purely financial measures indicated in question 3. taken independently of the internal financial reporting system, as a source of information for the evaluation and control of foreign subsidiary operating performance).

- idem -

NOTFRS

(Systematic use by HQ in the performance evaluation and control process of information reported by subsidiaries through formal channels but NOT INCLUDED in the internal financial reporting system (e.g. reported through the marketing information system, if any, etc.)).

1 Yes

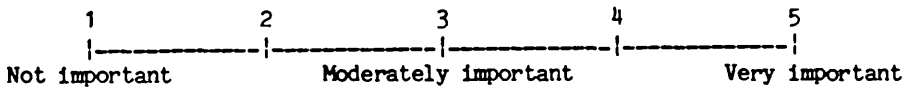
2 No

99 Not determined

999 Not applicable

STARGET

(A specific performance target previously set for the subsidiary - standard used in the firm to evaluate foreign subsidiary operating performance).



0 = the standard is not used in the firm

99 Not determined

999 Not applicable

STPAST

(The past actual results of the subsidiary (e.g. trends based on historical data) - standard used in the firm to evaluate foreign subsidiary operating performance).

- idem -

STCOHC

(The results of similar firms in the host country where the subsidiary operates - standard used in the firm to evaluate foreign subsidiary operating performance).

- idem -

STSBHC

(The results of other similar subsidiaries of your firm, operating in the same host country - standard used in the firm to evaluate foreign subsidiary operating performance).

- idem -

STSBDC

(The results of other similar subsidiaries of your firm, operating in different host countries - standard used in the firm to evaluate foreign subsidiary operating performance).

- idem -

STSBUC

(The results of other similar subsidiaries of your firm, operating in the U.K. - standard used in the firm to evaluate foreign subsidiary operating performance).

- idem -

STOTH

(Other standards used in the firm to evaluate foreign subsidiary operating performance).

- idem -

TARGAPP

(Who prepares and approves the foreign subsidiaries' performance targets).

- 1 (a) Subsidiary managers select and set their own performance targets without consulting HQ.
- 2 (b) Subsidiary managers select the performance target, and submit it to HQ for approval. HQ usually accepts proposed targets.
- 3 (c) HQ and subsidiary managers collectively assess alternative performance targets and attempt to reach consensus. The target that has the support of both is the one that is set.
- 4 (d) HQ managers select the performance target, and submit it to the subsidiary managers for ideas and suggestions. HQ managers then make the decision.
- 5 (e) HQ managers select and set the subsidiary performance target without consulting subsidiary managers.

99 Not determined

999 Not applicable

TARGDET

(How are the foreign subsidiaries' performance targets determined).

- 1 (a) On the basis of the subsidiary budget.
 - 2 (b) On the basis of the company's overall objectives, with no explicit reference to the subsidiary budget.
 - 3 (c) By management judgement (either at HQ or subsidiaries), with no explicit reference to company's objectives or the subsidiary budget.
 - 4 — On the basis of the company's overall objectives, adapted to the subsidiary budget (combination of (a) and (b) above).
 - 5 (d) Other ways of determining targets.
- 99 Not determined
- 999 Not applicable

TARGVARN

(Extent to which the nature of subsidiary performance targets varies across foreign operations in the firm (e.g. ROI for some subsidiaries, market share for others, cash flow for others).

1 2 3 4 5
 |-----|-----|-----|-----|
 very little to a moderate extent very extensively

- 99 Not determined
- 999 Not applicable

TARGVARV

(Extent to which the value of subsidiary performance targets varies across foreign operations in the firm (e.g. 18% of ROI for some subsidiaries, 10% of ROI for others).

- idem -

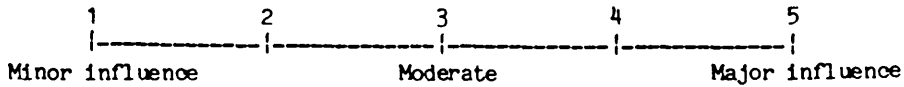
SAME

(Regular use by HQ of the same formal criteria (i.e items in the financial reporting system, performance measures and standards) to control and evaluate the operating performance of ALL the company's foreign subsidiaries).

- 1 (a) Yes (the same criteria with the same weights)
 - 2 (b) Yes (the same criteria but with different weights)
 - 3 (c) No
- 99 Not determined
- 999 Not applicable (companies with only one foreign subsidiary)

INFGEO

(Geographic location of subsidiary (e.g. Europe, Latin America, Asia, etc.) - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).



0 = the factor does not vary across foreign operations in the firm - MISSING VALUE

99 Not determined

999 Not applicable (For those cases which ticked (a) in question 8.)

INFENV

(Particular characteristics of the host environment, posing special threats and/or opportunities to subsidiary - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFSIZE

(Size of subsidiary - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFSTRAT

(Strategic importance of subsidiary for the company as a whole - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFPERF

(Unsatisfactory performance level of subsidiary - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFRESPY

(Type of responsibility assigned to subsidiary (i.e. subsidiary as a profit-centre vs. subsidiary as a cost-centre) - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFOWN

(Ownership share in subsidiary (i.e. wholly owned vs. partly owned subsidiaries or joint ventures) - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFFCN

(Dominant managerial function in subsidiary (e.g. marketing-oriented subsidiary vs. production-oriented subsidiary) - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFNAT

(Nature or type of business in subsidiary - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

INFOTH

(Other factors - influence the factor had in determining differences in weights or criteria formally used to control and evaluate the operating performance of foreign subsidiaries).

- idem -

EFORVDOM

(Extent to which the formal criteria (i.e. items in the financial reporting system, performance measures and standards) used to control and evaluate the operating performance of foreign subsidiaries differ from the criteria used for domestic subsidiaries).

- 1 (a) No difference (the same criteria are used)
 - 2 (b) Little difference (only in some minor aspects the criteria differ)
 - 3 (c) Substantial difference (the criteria differ in major aspects)
- 99 Not determined

EMAN

(Formal assessment of foreign subsidiary managers based on information provided by the financial reporting system operated between subsidiaries and HQ).

- 1 Yes
 - 2 No
- 99 Not determined
- 999 Not applicable (i.e. there is no formal assessment by HQ of managerial performance)

EMANVSUB

(How the formal criteria (i.e. items in the financial reporting system, performance measures and standards) used to assess the performance of foreign subsidiary managers compare to the criteria used to evaluate the performance of foreign subsidiary operations).

- | | |
|---|---|
| 1 (a) The same (managerial performance is totally identified with subsidiary performance) | 3 (c) Significantly different |
| 2 (b) Little different | 4 (d) Entirely different (totally separate criteria are used) |
| 99 Not determined | |
| 999 Not applicable | |

Below are listed several environmental factors that may have an impact upon subsidiaries' activities, and whose relevance may vary from one geographic area to another.

The variables specified below indicate for each geographic area where the company operates the degree of influence exerted by the respective environmental factor on subsidiaries' operating performance.

- | | |
|---|--|
| 1 the most influential environmental factor | 6 the sixth most influential |
| 2 the second most influential | 7 the seventh most influential |
| 3 the third most influential | 8 the eighth most influential |
| 4 the fourth most influential | 9 factor ticked but not assigned an order of importance |
| 5 the fifth most influential | |
| 99 Not determined | 999 Not applicable (geographic areas where the company does not operate) |

APPENDIX C

	Europe	US and Canada	Latin America	Africa	Middle East	Asia	Australia & N.Zeal.
Political stability	POLST1	POLST2	POLST3	POLST4	POLST5	POLST6	POLST7
Labour strikes and social unrest	STRIK1	STRIK2	STRIK3	STRIK4	STRIK5	STRIK6	STRIK7
Attitude toward achievement and work	ATTWRK1	ATTWRK2	ATTWRK3	ATTWRK4	ATTWRK5	ATTWRK6	ATTWRK7
General attitude toward foreign companies	ATTMNE1	ATTMNE2	ATTMNE3	ATTMNE4	ATTMNE5	ATTMNE6	ATTMNE7
Language, religion, and other cultural factors	CULTU1	CULTU2	CULTU3	CULTU4	CULTU5	CULTU6	CULTU7
Economic growth/stagnation	EOGROW1	EOGROW2	EOGROW3	EOGROW4	EOGROW5	EOGROW6	EOGROW7
Taxation	TAX1	TAX2	TAX3	TAX4	TAX5	TAX6	TAX7
Availability of infra-structures (e.g. communications, transportation, housing)	INFRA1	INFRA2	INFRA3	INFRA4	INFRA5	INFRA6	INFRA7
Availability of cash/capital	CASH1	CASH2	CASH3	CASH4	CASH5	CASH6	CASH7
Restrictions on movements of capital across borders	KMOVE1	KMOVE2	KMOVE3	KMOVE4	KMOVE5	KMOVE6	KMOVE7
Import-export controls	IECTL1	IECTL2	IECTL3	IECTL4	IECTL5	IECTL6	IECTL7
Price and other Governmental controls	GOVCTL1	GOVCTL2	GOVCTL3	GOVCTL4	GOVCTL5	GOVCTL6	GOVCTL7
Legal structures in terms of business law and labour law	LAW1	LAW2	LAW3	LAW4	LAW5	LAW6	LAW7
Inflation rates	INFLAT1	INFLAT2	INFLAT3	INFLAT4	INFLAT5	INFLAT6	INFLAT7
Exchange rates	EXCH1	EXCH2	EXCH3	EXCH4	EXCH5	EXCH6	EXCH7
Market size	MKTSIZ1	MKTSIZ2	MKTSIZ3	MKTSIZ4	MKTSIZ5	MKTSIZ6	MKTSIZ7
Cost of production inputs	CINPT1	CINPT2	CINPT3	CINPT4	CINPT5	CINPT6	CINPT7
Other environmental factors	FOTH1	FOTH2	FOTH3	FOTH4	FOTH5	FOTH6	FOTH7

AEPFSUB

(How EFFECTIVE are the company's FORMAL performance evaluation criteria (i.e. items in the financial reporting system, performance measures and standards) in taking account of significant foreign environmental factors in the control and evaluation of subsidiaries).

1	2	3	4	5
-----	-----	-----	-----	
not at all		moderately		most effective
effective		effective		

99 Not determined

AEFFMAN

(How **EFFECTIVE** are the company's FORMAL performance evaluation criteria (i.e. items in the financial reporting system, performance measures and standards) in taking account of significant foreign environmental factors in the evaluation of subsidiary managers).

1	2	3	4	5
-----	-----	-----	-----	
not at all		moderately		most effective
effective		effective		

99 Not determined

999 Not applicable (companies which do not evaluate subsidiary managers on the basis of "formal performance evaluation criteria")

DEFFSUB

(Extent to which formal performance evaluation criteria (i.e. items in the financial reporting system, performance measures and standards) SHOULD, in the personal opinion of the respondent, be able to take account of significant foreign environmental factors in the control and evaluation of subsidiaries).

1	2	3	4	5
-----	-----	-----	-----	
not at all		to a moderate		to a great
		extent		extent

99 Not determined

DEFFMAN

(Extent to which formal performance evaluation criteria (i.e. items in the financial reporting system, performance measures and standards) SHOULD, in the personal opinion of the respondent, be able to take account of significant foreign environmental factors in the evaluation of subsidiary managers).

1	2	3	4	5
-----	-----	-----	-----	
not at all		to a moderate		to a great
		extent		extent

99 Not determined

999 Not applicable (companies which do not evaluate subsidiary managers on the basis of "formal performance evaluation criteria")

SECTION IV - THE USE OF INFORMAL INFORMATION FOR FOREIGN SUBSIDIARY PERFORMANCE EVALUATION AND CONTROL

Informal communication channels most frequently used by HQ managers in the firm to gather information about subsidiaries' operations and their managers :

INFLCHM1

(Personal visits to subsidiaries)

1 Yes

2 No

99 Not determined

INFLCHM2

(Contacts with subsidiary personnel (by telephone, telex, letter, etc.)

- idem -

INFLCHM3

(Social meetings)

- idem -

INFLCHM4

(Personal visits to the UK by subsidiary managers)

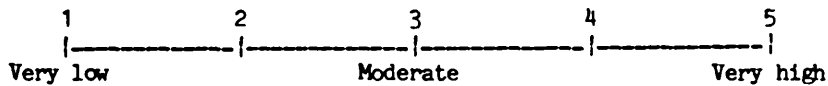
- idem -

INFLCHM5(Other communication channels internal to the firm)

- idem -

INFLCHM6(Communication channels external to the firm)

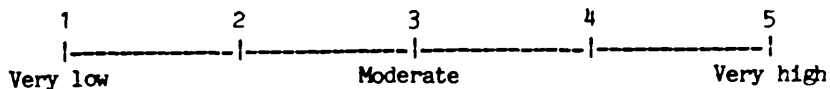
- idem -

FLSUB(Importance given by HQ management to information collected via formal channels for the purpose of evaluation and control of foreign subsidiaries).

99 Not determined

INFLSUB(Importance given by HQ management to information collected via informal channels for the purpose of evaluation and control of foreign subsidiaries).

- idem -

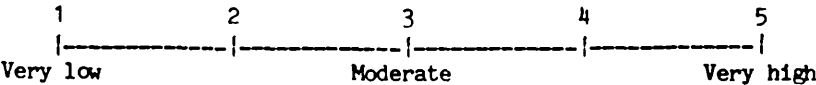
FLMAN(Importance given by HQ management to information collected via formal channels for the purpose of evaluation of foreign subsidiaries' managers).

99 Not determined

999 Not applicable (companies which do not evaluate subsidiary managers on the basis of "formal performance evaluation criteria")

INFLMAN

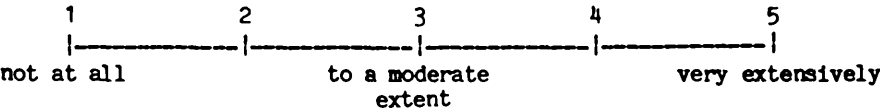
(Importance given by HQ management to information collected via informal channels for the purpose of evaluation of foreign subsidiaries' managers).



99 Not determined

INFLESUB

(Extent to which FOREIGN ENVIRONMENTAL information is obtained through informal channels, for the purpose of evaluation and control of foreign subsidiaries).



99 Not determined

INFLEMAN

(Extent to which FOREIGN ENVIRONMENTAL information is obtained through informal channels, for the purpose of evaluation of foreign subsidiaries' managers).

- idem -

Below are listed several statements about the purpose and nature of the information used for performance evaluation and control purposes, collected through informal channels. Respondents were asked to give their opinion on each of the statements. The answers refer to the situation encountered in the companies' HQ as far as the use of informal information for performance evaluation is concerned.

INFL1SUB

(Informal information tends to replace information reported via the formal channels - Evaluation of foreign subsidiaries).

1 Agree

2 Disagree

99 Not determined

INFL1MAN

(Informal information tends to replace information reported via the formal channels - Evaluation of managers).

1 Agree

2 Disagree

99 Not determined

999 Not applicable (companies which do not evaluate subsidiary managers on the basis of "formal performance evaluation criteria")

INFL2SUB

(Informal information tends to supplement information reported via the formal channels-
Evaluation of foreign subsidiaries).

- idem -

INFL2MAN

(Informal information tends to supplement information reported via the formal channels-
Evaluation of managers).

- idem -

INFL3SUB

(The frequency of informal communication between subsidiaries and HQ is generally high-
Evaluation of foreign subsidiaries).

- idem -

INFL3MAN

(The frequency of informal communication between subsidiaries and HQ is generally high-
Evaluation of managers).

- idem -

INFL4SUB

(Informal information is mainly concerned with non-routine matters - Evaluation of
foreign subsidiaries).

- idem -

INFL4MAN

(Informal information is mainly concerned with non-routine matters - Evaluation of
managers).

- idem -

INFL5SUB

(An important purpose of informal information is to confirm information reported via
the formal channels - Evaluation of foreign subsidiaries).

- idem -

INFL5MAN

(An important purpose of informal information is to confirm information reported via
the formal channels - Evaluation of managers).

- idem -

INFL6SUB

(An important purpose of informal information is to anticipate information that is
subsequently reported via the formal channels - Evaluation of foreign subsidiaries).

- idem -

INFL6MAN

(an important purpose of informal information is to anticipate information that is
subsequently reported via the formal channels - Evaluation of managers).

- idem -

INFL7SUB

(An important purpose of informal information is to compensate for the rigidity and
insufficiencies of the information reported via the formal channels - Evaluation of
foreign subsidiaries).

INFL7MAN

(An important purpose of informal information is to compensate for the rigidity and insufficiencies of the information reported via the formal channels - Evaluation of managers).

- idem -

Main reason(s) for the use by HQ of information collected through informal channels for performance evaluation and control purposes. It is to satisfy the need for :

INFLRM1

(a higher volume of information on vital issues)

1 Yes

2 No

99 Not determined

INFLRM2

(information covering exceptional and unpredicted situations)

- idem -

INFLRM3

(confidential information)

- idem -

INFLRM4

(more timely information)

- idem -

INFLRM5

(more reliable information)

- idem -

INFLRM6

(more accurate - i.e. precise - information)

- idem -

INFLRM7

(more understandable and useful information)

- idem -

INFLRM8

(other reasons)

- idem -

SECTION V - GENERAL INFORMATION

COUNTRY1

(Number of countries in Europe (excl. UK) where the company maintains control over manufacturing (or other industrial) operations).

Real positive number

99 Not determined

COUNTRY2

(Number of countries in U.S. and Canada where the company maintains control over manufacturing (or other industrial) operations).

- idem -

COUNTRY3

(Number of countries in Latin America where the company maintains control over manufacturing (or other industrial) operations).

- idem -

COUNTRY4

(Number of countries in Africa where the company maintains control over manufacturing (or other industrial) operations).

- idem -

COUNTRY5

(Number of countries in the Middle East where the company maintains control over manufacturing (or other industrial) operations).

- idem -

COUNTRY6

(Number of countries in Asia where the company maintains control over manufacturing (or other industrial) operations).

- idem -

COUNTRY7

(Number of countries in Australia and New Zealand where the company maintains control over manufacturing (or other industrial) operations).

- idem -

FIRSTOUT

(When the company established its first manufacturing (or other industrial) operation outside the U.K.).

- | | |
|-------------------------------------|-------------------------------------|
| 1 (a) Before 1900 | 4 (d) During the 1960s |
| 2 (b) Between 1900 and World War II | 5 (e) During the <u>early</u> 1970s |
| 3 (c) Between World War II and 1960 | 6 During the <u>late</u> 1970s |
| | 7 (f) In the 1980s |
| 99 Not determined | |

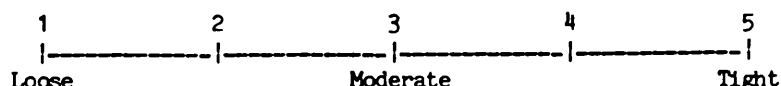
STRUCT

(How the company is structurally organized).

- 1 (a) Holding company structure (the company is organized by its different subsidiaries, each operating independently of headquarters' policy-making)
- 2 (b) Functional structure (company-wide organization by major functional areas : finance, marketing, etc.)
- (c) Multidivisional structure :
 - 3 - Company-wide organization by product
 - 4 - Company-wide organization by geographic area
 - 5 - Organized by product in the domestic market and by geographic area in overseas markets
 - 6 - Organized by international division for overseas operations
 - 7 - Matrix or grid structure (company-wide organization by product and geography simultaneously; involves shared responsibility across divisions)
- 8 (d) Other types of organizational structure
- 99 Not determined

CONTROL

(Degree of control exercised by HQ over foreign subsidiaries, as far as policy and strategic decisions are concerned (e.g. decisions involving definition of key products in subsidiaries, allocation of resources, expansion and diversification of subsidiary operations, etc)).



99 Not determined

STRATEGY

(Strategies followed by the company in the organization of its international manufacturing (or other industrial) activity).

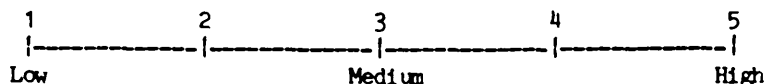
- 4 (a) A global integration strategy - manufacturing is integrated on a worldwide or regional (e.g. EEC) basis, with substantial volume of components, semi finished, and/or finished products moving between plants located in different countries.
- 1 (b) A segmented nation-for-nation strategy - manufacturing is based on local plants, substantially independent of each other. The volume of intersubsidiary transfers is low.
- (c) A mixture of both :
 - 3 - with a higher propensity to a global integration strategy.
 - 2 - with a higher propensity to a segmented nation-for-nation strategy.

99 Not determined

There are firms whose products being of strategic importance to most host countries are particularly exposed to local government influence in their foreign subsidiaries. The same may happen when firms have as their major international costumers national governments or state owned enterprises.

EXPOSURE

(Degree of exposure of the company to host country and government influence in its foreign operations).



99 Not determined

ASSETOUT

(Proportion of total assets located outside the U.K. to total company assets).
 -figures for the latest fiscal year-

Real positive number (% of the company's total assets that are located overseas)

99 Not determined

SIZSALE

(Size of the company measured in sales revenue for the group).

Real positive number

99 Not determined

SIZASSET

(Size of the company measured in total assets for the group).

Real positive number

99 Not determined

SALEOUT

(Proportion of sales from foreign subsidiaries to group consolidated sales revenue).

Real positive number (% of the company's total sales that are originated overseas)

99 Not determined

INDUSTRY

(The dominant industry for the international activities of the group).

<To be defined>

COPHILOS

(Company philosophy - Aggregates variables **CONTROL** and **STRATEGY**).

- 1 Ethnocentric company - Companies with a segmented nation-for-nation strategy and a degree of control of 4 or 5.
- 2 Ethnocentric/Polycentric company - Companies with a segmented nation-for-nation strategy and a degree of control of 3.
- 3 Polycentric company - Companies with a segmented nation-for-nation strategy and a degree of control of 1 or 2.
- 4 Polycentric/Geocentric company - Companies with a non segmented nation-for-nation strategy (i.e. with either a global integration strategy, or a mixed-segmented strategy or a mixed-global strategy) and with a degree of control of 1 or 2 for those companies with a mixed-segmented strategy, or a degree of control of 1, 2 or 3 for those companies with a mixed-global strategy or a global strategy.
- 5 Geocentric company - Companies with a global strategy or a mixed-global strategy, and with a degree of control of 4 or 5.
- 6 Ethnocentric/Geocentric company - Companies with a mixed-segmented strategy, and with a degree of control of 4 or 5.
- 7 Other (uncharacteristic) company - Companies with a mixed-segmented strategy, and with a degree of control of 3.
- 99 Not determined (For all those cases with missing values in the variables **CONTROL** and/or **STRATEGY**)

APPENDIX D

CROSSTABULATIONS BETWEEN VARIABLES OF THE STUDY

Table I - Contingency Table and Summary Statistics for Variables ENFCN and STRATEGY

***** C R O S S T A B U L A T I O N O F *****
 ENFCN BY STRATEGY

ENFCN	STRATEGY				
	COUNT	I			
	ROW PCT	I		ROW	
	COL PCT	I		TOTAL	
	TOT PCT	I	1 I	2 I	I
-----I-----I-----I					
1	I	3	I	13	I 16
	I	18.7	I	81.2	I 18.2
	I	5.1	I	44.8	I
	I	3.4	I	14.8	I
-I-----I-----I					
2	I	41	I	14	I 55
	I	74.5	I	25.5	I 62.5
	I	69.5	I	48.3	I
	I	46.6	I	15.9	I
-I-----I-----I					
3	I	15	I	2	I 17
	I	88.2	I	11.8	I 19.3
	I	25.4	I	6.9	I
	I	17.0	I	2.3	I
-I-----I-----I					
COLUMN		59		29	88
TOTAL		67.0		33.0	100.0

RAW CHI SQUARE = 21.74567 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = 0.0000

CRAMER'S V = 0.49710

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.13198 WITH ENFCN DEPENDENT.
 = 0.19184 WITH STRATEGY DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 9

NOTES: Key to acronyms and values: **ENFCN** = Environmental function - How foreign environmental info. is collected and analysed in HQ. 1 = There are one or more managers with formal responsibility for collecting and analysing foreign environmental information (f.e.i.); 2 = F.e.i. is usually collected and analysed but nobody has formal responsibility for this; 3 = The collection and analysis of f.e.i. is not usually carried out either formally or informally.

STRATEGY = Strategies followed by companies in the organization of their international industrial activities. 1 = Segmented nation-for-nation strategy; 2 = Global integration strategy -pure or mixed- (this class aggregates values 2, 3, and 4 of the code originally defined).

Table II - Contingency Table and Summary Statistics for Variables ENFCN and NCOUNTRY

***** C R O S S T A B U L A T I O N O F *****
 ENFCN BY NCOUNTRY

		NCOUNTRY						
COUNT		I						
ROW	PCT	I	-5		6-10		11+	ROW
COL	PCT	I						TOTAL
TOT	PCT	I	1	I	2	I	3	I
ENFCN								
	1	I	1	I	8	I	8	I 17
		I	5.9	I	47.1	I	47.1	I 18.1
		I	2.9	I	28.6	I	25.0	I
		I	1.1	I	8.5	I	8.5	I
	2	I	20	I	18	I	20	I 58
		I	34.5	I	31.0	I	34.5	I 61.7
		I	58.8	I	64.3	I	62.5	I
		I	21.3	I	19.1	I	21.3	I
	3	I	13	I	2	I	4	I 19
		I	68.4	I	10.5	I	21.1	I 20.2
		I	38.2	I	7.1	I	12.5	I
		I	13.8	I	2.1	I	4.3	I
COLUMN			34		28		32	94
TOTAL			36.2		29.8		34.0	100.0

RAW CHI SQUARE = 15.71114 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = 0.0034

CRAMER'S V = 0.28908

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.10012 WITH ENFCN DEPENDENT
 = 0.08504 WITH NCOUNTRY DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 3

NOTES: Key to acronyms and values: **ENFCN** = Environmental function - How foreign environmental info. is collected and analysed in HQ. 1 = There are one or more managers with formal responsibility for collecting and analysing foreign environmental information (f.e.i.); 2 = F.e.i. is usually collected and analysed but nobody has formal responsibility for this; 3 = The collection and analysis of f.e.i. is not usually carried out either formally or informally.

NCOUNTRY = Total number of countries
 -excl. U.K.- where each company maintains control over industrial operations.

Table III - Contingency Table and Summary Statistics for Variables ENFCN and NAREA

CROSS TABULATION OF									
ENFCN					BY NAREA				
NAREA									
COUNT	I							ROW	
ROW PCT	I	1-3	4-5		6-7		ROW		
COL PCT	I							TOTAL	
TOT PCT	I	1	I	2	I	3	I		
ENFCN	-----I-----I-----I-----I-----I								
1	I	1	I	8	I	8	I	17	
	I	5.9	I	47.1	I	47.1	I	18.1	
	I	2.9	I	21.1	I	36.4	I		
	I	1.1	I	8.5	I	8.5	I		
	-----I-----I-----I-----I-----I								
2	I	20	I	26	I	12	I	58	
	I	34.5	I	44.8	I	20.7	I	61.7	
	I	58.8	I	68.4	I	54.5	I		
	I	21.3	I	27.7	I	12.8	I		
	-----I-----I-----I-----I-----I								
3	I	13	I	4	I	2	I	19	
	I	68.4	I	21.1	I	10.5	I	20.2	
	I	38.2	I	10.5	I	9.1	I		
	I	13.8	I	4.3	I	2.1	I		
	-----I-----I-----I-----I-----I								
COLUMN		34		38		22		94	
TOTAL		36.2		40.4		23.4		100.0	

2 OUT OF 9 (22.2%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS
THAN 5.0. MINIMUM EXPECTED CELL FREQUENCY = 3.979
RAW CHI SQUARE = 17.64113 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = 0.0015
CRAMER'S V = 0.30633
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.10655 WITH ENFCN DEPENDENT.
= 0.09232 WITH NAREA DEPENDENT.
NUMBER OF MISSING OBSERVATIONS = 3

NOTES: Key to acronyms and values: **ENFCN** = Environmental function - How foreign environmental info. is collected and analysed in HQ. 1 = There are one or more managers with formal responsibility for collecting and analysing foreign environmental information (f.e.i.); 2 = F.e.i. is usually collected and analysed but nobody has formal responsibility for this; 3 = The collection and analysis of f.e.i. is not usually carried out either formally or informally.

NAREA = Number of different geographic areas in the world where each company maintains control over industrial operations.

Table IV - Contingency Table and Summary Statistics for Variables ENFCN and EXPOSURE

***** C R O S S T A B U L A T I O N O F *****										
ENFCN					BY EXPOSURE					

EXPOSURE										
	COUNT	I	Low	Medium to						
ROW	PCT	I		High	ROW					
COL	PCT	I	1-2	3-5	TOTAL					
TOT	PCT	I	1	2	I					
ENFCN		I-----I-----I								
	1	I	5	I	12	I	17			
		I	29.4	I	70.6	I	18.5			
		I	10.4	I	27.3	I				
		I	5.4	I	13.0	I				
		-I-----I-----I								
	2	I	29	I	28	I	57			
		I	50.9	I	49.1	I	62.0			
		I	60.4	I	63.6	I				
		I	31.5	I	30.4	I				
		-I-----I-----I								
	3	I	14	I	4	I	18			
		I	77.8	I	22.2	I	19.6			
		I	29.2	I	9.1	I				
		I	15.2	I	4.3	I				
		-I-----I-----I								
	COLUMN			48	44		92			
	TOTAL			52.2	47.8		100.0			

Table V - Contingency Tables and Summary Statistics for Variables ENFCN and CONTROL

***** C R O S S T A B U L A T I O N O F *****										
ENFCN					BY CONTROL					

CONTROL										
ENFCN	COUNT	I Loose to			Tight			ROW		
	ROW PCT	I Moderate						TOTAL		
	COL PCT	I 1-3			4 5					
	TOT PCT	I 1 I 2 I 3 I								
		-----I-----I-----I-----I								
	1	I 6 I 8 I 3 I							17	
		I 35.3 I 47.1 I 17.6 I							18.1	
		I 19.4 I 22.2 I 11.1 I								
		I 6.4 I 8.5 I 3.2 I								
		-----I-----I-----I-----I								
2	I 15 I 20 I 23 I							58		
	I 25.9 I 34.5 I 39.7 I							61.7		
	I 48.4 I 55.6 I 85.2 I									
	I 16.0 I 21.3 I 24.5 I									
	-----I-----I-----I-----I									
3	I 10 I 8 I 1 I							19		
	I 52.6 I 42.1 I 5.3 I							20.2		
	I 32.3 I 22.2 I 3.7 I									
	I 10.6 I 8.5 I 1.1 I									
	-----I-----I-----I-----I									
COLUMN		31 36 27						94		
TOTAL		33.0 38.3 28.7						100.0		

1 OUT OF 9 (11.1%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0. MINIMUM EXPECTED CELL FREQUENCY = 4.883
RAW CHI SQUARE = 10.55651 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0320
CRAMER'S V = 0.23696
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.06863 WITH ENFCN DEPENDENT.
= 0.05849 WITH CONTROL DEPENDENT.
NUMBER OF MISSING OBSERVATIONS = 3

NOTES: Key to acronyms and values: ENFCN = Environmental function - How foreign environmental info. is collected and analysed in HQ. 1 = There are one or more managers with formal responsibility for collecting and analysing foreign environmental information (f.e.i.); 2 = F.e.i. is usually collected and analysed but nobody has formal responsibility for this; 3 = The collection and analysis of f.e.i. is not usually carried out either formally or informally.

CONTROL = Degree of control exercised by HQ over foreign subsidiaries, as far as policy and strategic decisions are concerned (e.g. decisions involving definition of key products in subsidiaries, allocation of resources, expansion and diversification of subsidiary operations, etc.).

Table VI - Contingency Table and Summary Statistics for Variables ECOND and ASSETOUT

***** C R O S S T A B U L A T I O N O F *****
 ECOND BY ASSETOUT

		ASSETOUT					
		COUNT					
		ROW PCT	I	-25%	26%+	ROW TOTAL	
		COL PCT	I				
ECOND		TOT PCT	I	1	I	2	I
			I		I		I
Not included	1	I	9	I	4	I	13
		I	69.2	I	30.8	I	14.8
		I	34.6	I	6.5	I	
		I	10.2	I	4.5	I	
Included only occasionally or annually	2	I	8	I	28	I	36
		I	22.2	I	77.8	I	40.9
		I	30.8	I	45.2	I	
		I	9.1	I	31.8	I	
Included half yearly or more often	3	I	9	I	30	I	39
		I	23.1	I	76.9	I	44.3
		I	34.6	I	48.4	I	
		I	10.2	I	34.1	I	
			I		I		I
COLUMN TOTAL			26		62		88
			29.5		70.5		100.0

1 OUT OF 6 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.

MINIMUM EXPECTED CELL FREQUENCY = 3.841

RAW CHI SQUARE = 11.54707 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0031

CRAMER'S V = 0.36224

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.05915 WITH ECOND DEPENDENT.

= 0.09832 WITH ASSETOUT DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 9

NOTES: Key to acronyms: **ECOND** = Reports on economic conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

ASSETOUT = Proportion of total assets located outside the U.K. to total company assets.

Table VII - Contingency Table and Summary Statistics for Variables ECOND and STRATEGY

***** C R O S S T A B U L A T I O N O F *****
 ECOND BY STRATEGY

		STRATEGY				
		COUNT	I			
		ROW PCT	I			ROW
		COL PCT	I			TOTAL
		TOT PCT	I	1	I	2
			I			I
ECOND						
	1	I	11	I	1	I
Not included		I	91.7	I	8.3	I
		I	18.3	I	3.3	I
		I	12.2	I	1.1	I
	2	I	13	I	2	I
Included only		I	86.7	I	13.3	I
occasionally		I	21.7	I	6.7	I
		I	14.4	I	2.2	I
	3	I	14	I	11	I
Included		I	56.0	I	44.0	I
annually		I	23.3	I	36.7	I
		I	15.6	I	12.2	I
	4	I	22	I	16	I
Included half		I	57.9	I	42.1	I
yearly or		I	36.7	I	53.3	I
more often		I	24.4	I	17.8	I
		COLUMN	60		30	90
		TOTAL	66.7		33.3	100.0

1 OUT OF 8 (12.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0. MINIMUM EXPECTED CELL FREQUENCY = 4.000

RAW CHI SQUARE = 8.67078 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0340

CRAMER'S V = 0.31039

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.04266 WITH ECOND DEPENDENT.
 = 0.08627 WITH STRATEGY DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 7

NOTES: Key to acronyms and values: ECOND = Reports on economic conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

STRATEGY = Strategies followed by companies in the organization of their international industrial activities. 1 = Segmented nation-for-nation strategy; 2 = Global integration strategy -pure or mixed- (this class aggregates values 2, 3, and 4 of the code originally defined).

Table VIII - Contingency Table and Summary Statistics for Variables PLSCOND and NCOUNTRY

***** C R O S S T A B U L A T I O N O F *****
 PLSCOND BY NCOUNTRY

		NCOUNTRY							
		COUNT	I						
		ROW PCT	I	-5	6-10	11+		ROW TOTAL	
		COL PCT	I						
		TOT PCT	I	1	2	3	I		
PLSCOND		-----	I	-----	I	-----	I		
	1		I	13	I	4	I	2	19
Not included			I	68.4	I	21.1	I	10.5	20.2
			I	39.4	I	13.8	I	6.2	
			I	13.8	I	4.3	I	2.1	
			I	-----	I	-----	I	-----	I
	2		I	10	I	8	I	6	24
Included only occasionally			I	41.7	I	33.3	I	25.0	25.5
			I	30.3	I	27.6	I	18.7	
			I	10.6	I	8.5	I	6.4	
			I	-----	I	-----	I	-----	I
	3		I	7	I	8	I	13	28
Included annually			I	25.0	I	28.6	I	46.4	29.8
			I	21.2	I	27.6	I	40.6	
			I	7.4	I	8.5	I	13.8	
			I	-----	I	-----	I	-----	I
	4		I	3	I	9	I	11	23
Included half yearly or more often			I	13.0	I	39.1	I	47.8	24.5
			I	9.1	I	31.0	I	34.4	
			I	3.2	I	9.6	I	11.7	
			I	-----	I	-----	I	-----	I
	COLUMN TOTAL			33		29		32	94
				35.1		30.9		34.0	100.0

RAW CHI SQUARE = 17.71046 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0070

CRAMER'S V = 0.30693

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.07132 WITH PLSCOND DEPENDENT.

= 0.08951 WITH NCOUNTRY DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 3

NOTES: Key to acronyms: **PLSCOND** = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

NCOUNTRY = Total number of countries -excluding U.K.- where the company maintains control over industrial operations.

Table IX - Contingency Table and Summary Statistics for Variables PLSCOND and NAREA

***** CROSSTABULATION OF *****
 PLSCOND BY NAREA

		NAREA						
COUNT		I						
ROW	PCT	I	1-3		4-5		6-7	ROW
COL	PCT	I						TOTAL
TOT	PCT	I	1	I	2	I	3	I
PLSCOND		I		I		I		I
	1	I	11	I	7	I	1	19
Not included		I	57.9	I	36.8	I	5.3	20.2
		I	32.4	I	18.4	I	4.5	
		I	11.7	I	7.4	I	1.1	
		I		I		I		I
	2	I	11	I	9	I	4	24
Included only		I	45.8	I	37.5	I	16.7	25.5
occasionally		I	32.4	I	23.7	I	18.2	
		I	11.7	I	9.6	I	4.3	
		I		I		I		I
	3	I	8	I	7	I	13	28
Included		I	28.6	I	25.0	I	46.4	29.8
annually		I	23.5	I	18.4	I	59.1	
		I	8.5	I	7.4	I	13.8	
		I		I		I		I
	4	I	4	I	15	I	4	23
Included half		I	17.4	I	65.2	I	17.4	24.5
yearly or		I	11.8	I	39.5	I	18.2	
more often		I	4.3	I	16.0	I	4.3	
		I		I		I		I
	COLUMN		34		38		22	94
	TOTAL		36.2		40.4		23.4	100.0

1 OUT OF 12 (8.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.

MINIMUM EXPECTED CELL FREQUENCY = 4.447

RAW CHI SQUARE = 20.87898 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0019

CRAMER'S V = 0.33325

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.07969 WITH PLSCOND DEPENDENT.

= 0.10218 WITH NAREA DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 3

NOTES: Key to acronyms: PLSCOND = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

NAREA = Number of different geographic areas in the world where the company maintains control over industrial operations.

Table X - Contingency Table and Summary Statistics for Variables PLSCOND and STRATEGY

***** C R O S S T A B U L A T I O N O F *****
 PLSCOND BY STRATEGY

PLSCOND	STRATEGY					
	COUNT	I				
	ROW PCT	I				ROW TOTAL
	COL PCT	I				
	TOT PCT	I	1	I	2	I
	-----	I-----	I-----	I-----	I-----	I-----
Not included	1	I	15	I	1	I 16
		I	93.7	I	6.2	I 18.2
		I	25.9	I	3.3	I
		I	17.0	I	1.1	I
		-I-----	I-----	I-----	I-----	I-----
Included only occasionally	2	I	18	I	6	I 24
		I	75.0	I	25.0	I 27.3
		I	31.0	I	20.0	I
		I	20.5	I	6.8	I
		-I-----	I-----	I-----	I-----	I-----
Included annually	3	I	14	I	12	I 26
		I	53.8	I	46.2	I 29.5
		I	24.1	I	40.0	I
		I	15.9	I	13.6	I
		-I-----	I-----	I-----	I-----	I-----
Included half yearly or more often	4	I	11	I	11	I 22
		I	50.0	I	50.0	I 25.0
		I	19.0	I	36.7	I
		I	12.5	I	12.5	I
		-I-----	I-----	I-----	I-----	I-----
	COLUMN		58		30	88
	TOTAL		65.9		34.1	100.0

RAW CHI SQUARE = 10.56427 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0143
 CRAMER'S V = 0.34648

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.05000 WITH PLSCOND DEPENDENT
 = 0.10685 WITH STRATEGY DEPENDENT

NUMBER OF MISSING OBSERVATIONS = 9

NOTES: Key to acronyms and values: PLSCOND = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

STRATEGY = Strategies followed by companies in the organization of their international industrial activities. 1 = Segmented nation-for-nation strategy; 2 = Global integration strategy -pure or mixed- (this class aggregates values 2, 3, and 4 of the code originally defined).

Table XI - Contingency Table and Summary Statistics for Variables PLSCOND and EXPOSURE

CROSS TABULATION OF							
PLSCOND				BY EXPOSURE			
EXPOSURE							
	COUNT	I	Low	Medium	High		
ROW	PCT	I	1	2-3	4-5	ROW	
COL	PCT	I				TOTAL	
TOT	PCT	I	1	2	3	I	
PLSCOND	-----	I-----	I-----	I-----	I-----	I	
Not included	1	I	10	I 7	I 2	I	19
		I	52.6	I 36.8	I 10.5	I	20.7
		I	34.5	I 17.1	I 9.1	I	
		I	10.9	I 7.6	I 2.2	I	
		I-----	I-----	I-----	I-----	I	
Included only	2	I	8	I 7	I 8	I	23
occasionally		I	34.8	I 30.4	I 34.8	I	25.0
		I	27.6	I 17.1	I 36.4	I	
		I	8.7	I 7.6	I 8.7	I	
		I-----	I-----	I-----	I-----	I	
Included	3	I	9	I 15	I 4	I	28
annually		I	32.1	I 53.6	I 14.3	I	30.4
		I	31.0	I 36.6	I 18.2	I	
		I	9.8	I 16.3	I 4.3	I	
		I-----	I-----	I-----	I-----	I	
Included half	4	I	2	I 12	I 8	I	22
yearly or		I	9.1	I 54.5	I 36.4	I	23.9
more often		I	6.9	I 29.3	I 36.4	I	
		I	2.2	I 13.0	I 8.7	I	
		I-----	I-----	I-----	I-----	I	
COLUMN			29	41	22		92
TOTAL			31.5	44.6	23.9		100.0

1 OUT OF 12 (8.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS
THAN 5.0. MINIMUM EXPECTED CELL FREQUENCY = 4.543

MINIMUM EXPECTED CELL FREQUENCY = 4.543

RAW CHI SQUARE = 13.63640 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0340

CRAMER'S V = 0.27223

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.05872 WITH PLSCOND DEPENDENT.
= 0.07580 WITH EXPOSURE DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 5

NOTES: Key to acronyms: **PLSCOND** = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

EXPOSURE = Degree of company exposure to host country and government influence in foreign operations.

Table XIII - Contingency Table and Summary Statistics for Variables PLSCOND and ASSETOUT

***** C R O S S T A B U L A T I O N O F *****
 PLSCOND BY ASSETOUT

		ASSETOUT						
		COUNT	I					
		ROW PCT	I	-25%	26%-40%	41%+	ROW	
		COL PCT	I				TOTAL	
		TOT PCT	I	1	2	3	I	
PLSCOND		-----	I-----	I-----	I-----	I-----	I-----	
Not included	1	I	11	I	4	I	3	18
		I	61.1	I	22.2	I	16.7	20.9
		I	42.3	I	12.9	I	10.3	
		I	12.8	I	4.7	I	3.5	
		-I-----	I-----	I-----	I-----	I-----	I-----	
Included only occasionally	2	I	5	I	11	I	7	23
		I	21.7	I	47.8	I	30.4	26.7
		I	19.2	I	35.5	I	24.1	
		I	5.8	I	12.8	I	8.1	
		-I-----	I-----	I-----	I-----	I-----	I-----	
Included annually	3	I	6	I	10	I	8	24
		I	25.0	I	41.7	I	33.3	27.9
		I	23.1	I	32.3	I	27.6	
		I	7.0	I	11.6	I	9.3	
		-I-----	I-----	I-----	I-----	I-----	I-----	
Included half yearly or more often	4	I	4	I	6	I	11	21
		I	19.0	I	28.6	I	52.4	24.4
		I	15.4	I	19.4	I	37.9	
		I	4.7	I	7.0	I	12.8	
		-I-----	I-----	I-----	I-----	I-----	I-----	
COLUMN			26		31		29	86
TOTAL			30.2		36.0		33.7	100.0

RAW CHI SQUARE = 13.48323 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0360

CRAMER'S V = 0.27998

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.05268 WITH PLSCOND DEPENDENT.

= 0.06636 WITH ASSETOUT DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 11

NOTES: Key to acronyms: **PLSCOND** = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

ASSETOUT = Proportion of total assets located outside the U.K. to total company assets.

Table XIII - Contingency Table and Summary Statistics for Variables PLSCOND and SIZASSET

***** C R O S S T A B U L A T I O N O F *****
 PLSCOND BY SIZASSET

		SIZASSET							
		COUNT	I						
ROW	PCT	I-	£100m	£101-£300	£301m	+	ROW		
COL	PCT	I					TOTAL		
TOT	PCT	I	1	I	2	I	3	I	
PLSCOND		-----I-----I-----I-----I							
Not included	1	I	10	I	4	I	5	I	
		I	52.6	I	21.1	I	26.3	I	
		I	27.0	I	13.8	I	17.2	I	
		I	10.5	I	4.2	I	5.3	I	
		-----I-----I-----I-----I							
Included only occasionally	2	I	14	I	6	I	4	I	
		I	58.3	I	25.0	I	16.7	I	
		I	37.8	I	20.7	I	13.8	I	
		I	14.7	I	6.3	I	4.2	I	
		-----I-----I-----I-----I							
Included annually	3	I	8	I	12	I	8	I	
		I	28.6	I	42.9	I	28.6	I	
		I	21.6	I	41.4	I	27.6	I	
		I	8.4	I	12.6	I	8.4	I	
		-----I-----I-----I-----I							
Included half yearly or quarterly	4	I	5	I	3	I	9	I	
		I	29.4	I	17.6	I	52.9	I	
		I	13.5	I	10.3	I	31.0	I	
		I	5.3	I	3.2	I	9.5	I	
		-----I-----I-----I-----I							
Included monthly	5	I	0	I	4	I	3	I	
		I	0.0	I	57.1	I	42.9	I	
		I	0.0	I	13.8	I	10.3	I	
		I	0.0	I	4.2	I	3.2	I	
		-----I-----I-----I-----I							
COLUMN			37		29		29		
TOTAL			38.9		30.5		30.5		
								95	
								100.0	

3 OUT OF 15 (20.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.

MINIMUM EXPECTED CELL FREQUENCY = 2.137

RAW CHI SQUARE = 16.67047 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0337
 CRAMER'S V = 0.29621

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.06411 WITH PLSCOND DEPENDENT.
 = 0.08982 WITH SIZASSET DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 2

NOTES: Key to acronyms: PLSCOND = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

SIZASSET = Size of the company measured in total assets for the group - millions of pounds.

Table XIV - Contingency Table and Summary Statistics for Variables PERCNFR and ENFCN

***** C R O S S T A B U L A T I O N O F *****
 PERCNFR BY ENFCN

		ENFCN							
		COUNT	I						
ROW	PCT	I						ROW	
COL	PCT	I						TOTAL	
TOT	PCT	I	1	I	2	I	3	I	
PERCNFR		I		I		I		I	
- 20%	1	I	2	I	20	I	11	I	
		I	6.1	I	60.6	I	33.3	I	
		I	12.5	I	34.5	I	61.1	I	
		I	2.2	I	21.7	I	12.0	I	
21% - 40%	2	I	8	I	27	I	6	I	
		I	19.5	I	65.9	I	14.6	I	
		I	50.0	I	46.6	I	33.3	I	
		I	8.7	I	29.3	I	6.5	I	
41% +	3	I	6	I	11	I	1	I	
		I	33.3	I	61.1	I	5.6	I	
		I	37.5	I	19.0	I	5.6	I	
		I	6.5	I	12.0	I	1.1	I	
COLUMN			16		58		18		
TOTAL			17.4		63.0		19.6	92	
								100.0	

2 OUT OF 9 (22.2%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.

MINIMUM EXPECTED CELL FREQUENCY = 3.130

RAW CHI SQUARE = 10.77819 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0292

CRAMER'S V = 0.24203

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.05836 WITH PERCNFR DEPENDENT.
 = 0.06684 WITH ENFCN DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 5

NOTES: Key to acronyms and values: PERCNFR = Percentage of non-financial reports in relation to the total number of reports submitted in a company by each foreign subsidiary during one year.

ENFCN = Environmental function - How foreign environmental info. is collected and analysed in HQ. 1 = There are one or more managers with formal responsibility for collecting and analysing foreign environmental information (f.e.i.); 2 = F.e.i. is usually collected and analysed but nobody has formal responsibility for this; 3 = The collection and analysis of f.e.i. is not usually carried out either formally or informally.

Table XV - Contingency Table and Summary Statistics for Variables ECOND and ENFCN

***** C R O S S T A B U L A T I O N O F *****
 ECOND BY ENFCN

		ENFCN							
	COUNT	I							
	ROW PCT	I							
	COL PCT	I							
	TOT PCT	I	1	I	2	I	3	I	ROW TOTAL
ECOND	-----	I	-----	I	-----	I	-----	I	
	1	I	0	I	5	I	8	I	13
Not included		I	0.0	I	38.5	I	61.5	I	13.7
		I	0.0	I	8.5	I	42.1	I	
		I	0.0	I	5.3	I	8.4	I	
		-I	-----	I	-----	I	-----	I	
	2	I	7	I	25	I	9	I	41
Included only		I	17.1	I	61.0	I	22.0	I	43.2
occasionally		I	41.2	I	42.4	I	47.4	I	
or annually		I	7.4	I	26.3	I	9.5	I	
		-I	-----	I	-----	I	-----	I	
	3	I	10	I	29	I	2	I	41
Included half		I	24.4	I	70.7	I	4.9	I	43.2
yearly or		I	58.8	I	49.2	I	10.5	I	
more often		I	10.5	I	30.5	I	2.1	I	
		-I	-----	I	-----	I	-----	I	
	COLUMN		17.		59		19		95
	TOTAL		17.9		62.1		20.0		100.0

2 OUT OF 9 (22.2%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0. MINIMUM EXPECTED CELL FREQUENCY = 2.326

RAW CHI SQUARE = 20.95953 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0003

CRAMER'S V = 0.33213

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.11283 WITH ECOND DEPENDENT.

= 0.12159 WITH ENFCN DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 2

NOTES: Key to acronyms and values: ECOND = Reports on economic conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

ENFCN = Environmental function - How foreign environmental info. is collected and analysed in HQ. 1 = There are one or more managers with formal responsibility for collecting and analysing foreign environmental information (f.e.i.); 2 = F.e.i. is usually collected and analysed but nobody has formal responsibility for this; 3 = The collection and analysis of f.e.i. is not usually carried out either formally or informally.

Table XVI - Contingency Tabulation and Summary Statistics for Variables
PLSCOND and ENFCN

***** C R O S S T A B U L A T I O N O F *****									
PLSCOND					BY ENFCN				

Table XVII - Contingency Table and Summary Statistics for Variables INFLSUB and TR

***** C R O S S T A B U L A T I O N O F *****									
INFLSUB					BY TR				

Table XVIII - Contingency Table and Summary Statistics for Variables INFLSUB and PERCNFR

***** C R O S S T A B U L A T I O N O F *****
INFLSUB BY PERCNFR

INFLSUB	PERCNFR					
	COUNT	I				
	ROW PCT	I -22.5%		22.5%+		ROW
	COL PCT	I				TOTAL
	TOT PCT	I	1	I	2	I
	-----I-----I-----I					
	1	I	26	I	22	I 48
Very low to		I	54.2	I	45.8	I 51.1
moderate		I	65.0	I	40.7	I
1 - 3		I	27.7	I	23.4	I
	-I-----I-----I					
	2	I	14	I	32	I 46
High or very high		I	30.4	I	69.6	I 48.9
4 - 5		I	35.0	I	59.3	I
		I	14.9	I	34.0	I
	-I-----I-----I					
	COLUMN		40		54	94
	TOTAL		42.6		57.4	100.0

CORRECTED CHI SQUARE = 4.48447 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.0342
PHI = 0.23994
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.04204 WITH INFLSUB DEPENDENT.
= 0.04271 WITH PERCNFR DEPENDENT.
NUMBER OF MISSING OBSERVATIONS = 3

NOTES: Key to acronyms: **INFLSUB** = Level of importance given by HQ management to information collected informally for the purpose of evaluation and control of foreign subsidiaries.
PERCNFR = Percentage of non-financial reports in relation to the total number of reports submitted in a company by each foreign subsidiary during one year.

Table XIX - Contingency Table and Summary Statistics for Variables INFLESUB and ECOND

INFLESUB		CROSS TABULATION OF						BY ECOND	
		ECOND							
		I		I		I			
		Not		Included		Included			
		Included		annually		half yearly			
		I or				or			
COUNT		Included				more often			
ROW	PCT	I only						ROW	
COL	PCT	I occasionally						TOTAL	
TOT	PCT	I	1	I	2	I	3	I	
INFLESUB		I		I		I		I	
	1	I	7	I	19	I	15	I	41
Not at all or		I	17.1	I	46.3	I	36.6	I	43.2
to a little extent		I	25.0	I	73.1	I	36.6	I	
1 - 2		I	7.4	I	20.0	I	15.8	I	
		I		I		I		I	
To a moderate	2	I	21	I	7	I	26	I	54
extent to		I	38.9	I	13.0	I	48.1	I	56.8
very extensively		I	75.0	I	26.9	I	63.4	I	
3 - 5		I	22.1	I	7.4	I	27.4	I	
		I		I		I		I	
			28		26		41		95
COLUMN			28		26		41		95
TOTAL			29.5		27.4		43.2		100.0

RAW CHI SQUARE = 13.97237 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0009

CRAMER'S V = 0.38351

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.10994 WITH INFLESUB DEPENDENT.
= 0.06977 WITH ECOND DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 2

NOTES: Key to acronyms: **INFLESUB** = Extent of collection through informal channels of foreign environmental information for the evaluation and control of foreign subsidiaries.

ECOND = Reports on economic conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

Table XX - Contingency Table and Summary Statistics for Variables INFLEMAN and ECOND

***** C R O S S T A B U L A T I O N O F *****
 INFLEMAN BY ECOND

		ECOND						
		I	Not		Included	Included		
		I	Included		annually	half yearly	or	
		I	or			more often		
COUNT		I	Included					
ROW	PCT	I	only					ROW
COL	PCT	I	occasionally					TOTAL
TOT	PCT	I	1	I	2	I	3	I
INFLEMAN		I		I		I		I
	1	I	5	I	13	I	9	I 27
Not at all or		I	18.5	I	48.1	I	33.3	I 45.0
to a little extent		I	33.3	I	76.5	I	32.1	I
1 - 2		I	8.3	I	21.7	I	15.0	I
		I		I		I		I
To a moderate	2	I	10	I	4	I	19	I 33
extent to		I	30.3	I	12.1	I	57.6	I 55.0
very extensively		I	66.7	I	23.5	I	67.9	I
3 - 5		I	16.7	I	6.7	I	31.7	I
		I		I		I		I
		I		I		I		I
	COLUMN		15		17		28	60
	TOTAL		25.0		28.3		46.7	100.0

RAW CHI SQUARE = 9.49777 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0087

CRAMER'S V = 0.39786

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.11827 WITH INFLEMAN DEPENDENT.
 = 0.07681 WITH ECOND DEPENDENT.

NOTES: Key to acronyms: **INFLEMAN** = Extent of collection through informal channels of foreign environmental information for the assessment of foreign subsidiaries' managers.

ECOND = Reports on economic conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

Table XXI - Contingency Table and Summary Statistics for Variables INFLESUB and PLSCOND

C R O S S T A B U L A T I O N O F									
I N F L E S U B				B Y P L S C O N D					
				P L S C O N D					
				I		I			
				I n o t		I n c l u d e d		I n c l u d e d	
				I n c l u d e d		a n n u a l l y		h a l f y e a r l y	
				I o r				o r	
C O U N T				I n c l u d e d				m o r e o f t e n	
ROW	PCT			I o n l y				R O W	
COL	PCT			I o c c a s i o n a l l y				T O T A L	
TOT	PCT	I	1	I	2	I	3	I	
I N F L E S U B		I		I		I		I	
	1	I	37	I	25	I	14	I	76
Not at all to		I	48.7	I	32.9	I	18.4	I	81.7
to a moderate		I	88.1	I	89.3	I	60.9	I	
extent		I	39.8	I	26.9	I	15.1	I	
1 - 3		I		I		I		I	
	2	I	5	I	3	I	9	I	17
Extensively or		I	29.4	I	17.6	I	52.9	I	18.3
very extensively		I	11.9	I	10.7	I	39.1	I	
4 - 5		I	5.4	I	3.2	I	9.7	I	
		I		I		I		I	
	C O U M N		42		28		23		93
	T O T A L		45.2		30.1		24.7		100.0

1 OUT OF 6 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0. MINIMUM EXPECTED CELL FREQUENCY = 4.204

RAW CHI SQUARE = 8.90926 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0116

CRAMER'S V = 0.30951

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.08980 WITH INFLESUB DEPENDENT.

= 0.04007 WITH PLS COND DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 4

NOTES: Key to acronyms: **IMPLESUB** = Extent of collection through informal channels of foreign environmental information for the evaluation and control of foreign subsidiaries.

PLSCOND = Reports on political, legal, and social conditions in host countries, as an item in the formal reporting system operated in a company between foreign subsidiaries and HQ.

APPENDIX E

COMPUTER PROGRAMME TO CREATE VARIABLE CRIT

```

RUN NAME          CREATION OF A NEW SYSTEM FILE AS A PREPARATION
                   FOR THE TESTS TO BE PERFORMED IN RELATION TO
                   HO 2 IN CHAPTER 12

GET FILE          STSPSS2
/ RECODE          EBS TO EKEXP (99=9)(999=9)
| IF              (EBS LT 9) SUM=EBS
| IF              (EBSUPDT LT 9) SUM=SUM+EBSUPDT
| IF              (EPL LT 9) SUM=SUM+EPL
| IF              (EPLUPDT LT 9) SUM=SUM+EPLUPDT
| IF              (ECF LT 9) SUM=SUM+ECF
| IF              (ESALES LT 9) SUM=SUM+ESALES
| IF              (EBORROW LT 9) SUM=SUM+EBORROW
| IF              (EKEXP LT 9) SUM=SUM+EKEXP
| COUNT          MISSING=EBS TO ECF,ESALES,EBORROW,EKEXP(9)
| COMPUTE         VALID=8-MISSING
| IF              (VALID GE 1) IND1=SUM/VALID
| IF              (VALID EQ 0) IND1=9
| MISSING VALUES IND1 (9)
| COMPUTE         SUM=0
Compont. 1 | IF              (EINV LT 9) SUM=SUM+EINV
| IF              (EMARKT LT 9) SUM=SUM+EMARKT
| IF              (EOUTPUT LT 9) SUM=SUM+EOUTPUT
| IF              (EMANUFUT LT 9) SUM=SUM+EMANUFUT
| IF              (ELABREL LT 9) SUM=SUM+ELABREL
| IF              (EQUALY LT 9) SUM=SUM+EQUALY
| IF              (EECOND LT 9) SUM=SUM+EECOND
| IF              (EPLSCOND LT 9) SUM=SUM+EPLSCOND
| IF              (EEMPLOY LT 9) SUM=SUM+EEMPLOY
| COUNT          MISSING=EINV,EMARKT TO EPLSCOND,EEMPLOY(9)
| COMPUTE         VALID=9-MISSING
| IF              (VALID GE 1) IND2=SUM/VALID
| IF              (VALID EQ 0) IND2=9
| MISSING VALUES IND2 (9)
| COMPUTE         CRIT1=IND2/IND1
| ASSIGN MISSING  CRIT1(99.999)
\ PRINT FORMATS  CRIT1 (3)
/ COUNT          IND3=IROI TO IPMOTH (1 THRU 9)
| COUNT          IND4=ICF TO INPMOTH (1 THRU 9)
| IF              (IND3 EQ 0) IND3=99
Compont. 2 | MISSING VALUES IND3 (99)
| COMPUTE         CRIT2=IND4/IND3
| ASSIGN MISSING  CRIT2 (99.999)
\ PRINT FORMATS  CRIT2 (3)
/ COMPUTE         CRIT3=PACKAGE*2-PURMEAS
Compont. 3 | ASSIGN MISSING CRIT3 (99.999)
\ PRINT FORMAT   CRIT3 (3)
/ COUNT          IND5=STARGET TO STSBUK(0)
| COMPUTE         CRIT4=6-IND5
| IF              (STARGET EQ 999 OR STPAST EQ 999) CRIT4=99.999
Compont. 4 | IF              (STCOHC EQ 999 OR STSBHC EQ 999) CRIT4=99.999
| IF              (STSBDC EQ 999 OR STSBUK EQ 999) CRIT4=99.999
| MISSING VALUES CRIT4 (99.999)
\ PRINT FORMATS  CRIT4 (3)

```

```

      / RECODE          TARGVARN,TARGVARV (999=99)
      | COMPUTE          SUM=0
      | IF              (TARGVARN LE 5) SUM=SUM+TARGVARN*2
      | IF              (TARGVARV LE 5) SUM=SUM+TARGVARV
      | COUNT           MISSING=TARGVARN,TARGVARV (99)
Compont. 5 | COMPUTE      VALID=2-MISSING
      | IF              (VALID EQ 2) CRIT5=SUM/3
      | IF              (VALID EQ 1 AND TARGVARN LE 5) CRIT5=SUM/2
      | IF              (VALID EQ 1 AND TARGVARN EQ 99) CRIT5=99.999
      | MISSING VALUES CRIT5 (99.999)
      \ PRINT FORMATS   CRIT5 (3)
Compont. 6 | RECODE      SAME(2=3)(3=5)(999=99.999)(99=99.999)
      | COMPUTE          CRIT6=SAME
      | MISSING VALUES CRIT6(99.999)
      \ PRINT FORMATS   CRIT6 (3)
      / COMPUTE          CRIT11=CRIT1*10
      | MISSING VALUES CRIT1(99.999)
Transfor- | ASSIGN MISSING CRIT11 (999)
mation    | RECODE        CRIT2(0.000=1)(0.143 THRU 0.200=2)(0.250 THRU
of         |              0.333=3)(0.400 THRU 0.429=4)(0.500=5)(0.600
values     |              THRU 0.625=6)(0.667 THRU 0.714=7)(0.750 THRU
into       |              0.833=8)(1.000=9)(1.143 THRU 3.000=10)
compara-  | COMPUTE      CRIT15=CRIT5*2
ble        | MISSING VALUES CRIT5(99.999)
ranges    | ASSIGN MISSING CRIT15(999)
      \ RECODE          CRIT6(1.000=6)(3.000=8)(5.000=10)
Synthes-  / COMPUTE      CRIT=CRIT11+CRIT2+CRIT3+CRIT4+CRIT15+CRIT6
sis        | ASSIGN MISSING CRIT(999)
Var.CRIT\ PRINT FORMATS CRIT(3)
          SAVE FILE      STSPSS3
          FINISH

```

APPENDIX F

COMPUTER PROGRAMME TO CREATE VARIABLE W

```

RUN NAME      CREATION OF A NEW SYSTEM FILE AS A PREPARATION TO THE
               TESTS TO BE PERFORMED IN RELATION TO H06 IN CHAPTER 12
GET FILE      STSPSS3
RECODE        POLST1 TO CINPT7 (9=0)(99=0)(999=0)
DO REPEAT     X=POLST,STRIK,ATTWRK,ATTMNE,CULTU,ECGROW,TAX,INFRA,CASH,KMOVE,
               IECTL,GOVCTL,LAW,INFLAT,EXCH,MKTSIZ,CINPT/X1=POLST1,STRIK1,
               ATTWRK1,ATTMNE1,CULTU1,ECGROW1,TAX1,INFRA1,CASH1,KMOVE1,IECTL1,
               GOVCTL1,LAW1,INFLAT1,EXCH1,MKTSIZ1,CINPT1/X2=POLST2,STRIK2,
               ATTWRK2,ATTMNE2,CULTU2,ECGROW2,TAX2,INFRA2,CASH2,KMOVE2,IECTL2,
               GOVCTL2,LAW2,INFLAT2,EXCH2,MKTSIZ2,CINPT2/X3=POLST3,STRIK3,
               ATTWRK3,ATTMNE3,CULTU3,ECGROW3,TAX3,INFRA3,CASH3,KMOVE3,IECTL3,
               GOVCTL3,LAW3,INFLAT3,EXCH3,MKTSIZ3,CINPT3/X4=POLST4,STRIK4,
               ATTWRK4,ATTMNE4,CULTU4,ECGROW4,TAX4,INFRA4,CASH4,KMOVE4,IECTL4,
               GOVCTL4,LAW4,INFLAT4,EXCH4,MKTSIZ4,CINPT4/X5=POLST5,STRIK5,
               ATTWRK5,ATTMNE5,CULTU5,ECGROW5,TAX5,INFRA5,CASH5,KMOVE5,IECTL5,
               GOVCTL5,LAW5,INFLAT5,EXCH5,MKTSIZ5,CINPT5/X6=POLST6,STRIK6,
               ATTWRK6,ATTMNE6,CULTU6,ECGROW6,TAX6,INFRA6,CASH6,KMOVE6,IECTL6,
               GOVCTL6,LAW6,INFLAT6,EXCH6,MKTSIZ6,CINPT6/X7=POLST7,STRIK7,
               ATTWRK7,ATTMNE7,CULTU7,ECGROW7,TAX7,INFRA7,CASH7,KMOVE7,IECTL7,
               GOVCTL7,LAW7,INFLAT7,EXCH7,MKTSIZ7,CINPT7
COMPUTE       X=X1+X2+X3+X4+X5+X6+X7
END REPEAT
COUNT
COMPUTE       K1=POLST1,POLST2,POLST3,POLST4,POLST5,POLST6,POLST7(0)
COMPUTE       K=7-K1
COMPUTE       RJ=POLST+STRIK+ATTWRK+ATTMNE+CULTU+ECGROW+TAX+INFRA+CASH+
               KMOVE+IECTL+GOVCTL+LAW+INFLAT+EXCH+MKTSIZ+CINPT
COMPUTE       MRJ= RJ/17
ASSIGN MISSING RJ,MRJ(0)
COMPUTE       S=(POLST-MRJ)**2+(STRIK-MRJ)**2+(ATTWRK-MRJ)**2+(ATTMNE-MRJ)**2+
               (CULTU-MRJ)**2+(ECGROW-MRJ)**2+(TAX-MRJ)**2+(INFRA-MRJ)**2+
               (CASH-MRJ)**2+(KMOVE-MRJ)**2+(IECTL-MRJ)**2+(GOVCTL-MRJ)**2+
               (LAW-MRJ)**2+(INFLAT-MRJ)**2+(EXCH-MRJ)**2+(MKTSIZ-MRJ)**2+
               (CINPT-MRJ)**2
COMPUTE       W=S/(K**2/12(17**3-17))
ASSIGN MISSING S,W(0)
PRINT FORMATS W(3)
SAVE FILE     STSPSS4
FINISH

```

