SIZE AND MANAGEMENT CHARACTERISTICS IN THE PUBLIC SECTOR

A CASE OF PAKISTAN INTERNATIONAL AIRLINES

BY

ABDUL HAMIED M.H.H. AL-ESHAIKER

M.B.A., 1983, UNIVERSITY OF BAGHDAD, IRAQ

B.B.A., 1972, UNIVERSITY OF BAGHDAD, IRAQ

A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

TO:

THE DEPARTMENT OF MANAGEMENT STUDIES

GLASGOW BUSINESS SCHOOL

UNIVERSITY OF GLASGOW

1990

To:

My family

DECLARATION

No portion of the work referred to in this study has been submitted in support of an application for another degree or qualifications of this or any other University or other institution of learning.

ABSTRACT

Over the past thirty years, substantial number of management scholars, economists, and industrial scientists have been involved in an argument about the impact of the organizational size and its management characteristics.

This thesis presents an exporation of specific organizational postulates on a cross-cultural basis. It attempts to tests their applicability in a developing country-Pakistan, in an organization which is considered to be one of the biggest organization in the country, which is Pakistan International Airlines (PIA).

The general thesis of this research is to take the stand to link the structural-behavioural aspects of size together as well as to find out the relationships and the associations between size and other organizational variables in the PIA's thirteen departments. It also intends to identify the overall structural-behavioural implications of the size of the PIA's departments.

This research is therefore designed as a contribution to the existing research on size and management characteristics-in general and specifically to Pakistan

International Airlines as it is the first coprehensive study of its type to be conducted there.

The research was carried out by fieldwork during 1987 in Pakistan, three types of research designs have been utilized in varing degrees, these are, case study, survey, and comparative study. The case study was the major research design adopted in this study to examine the relationships between size and our selected organizational variables in the thirteen departments of Pakistan International Airlines.

Acknowledgment

On the accomplishment of this study, I should like to express my sincere appreciation and gratitude to all those whose co-operation made this project possible.

My first gratitude and appreciation goes to my supervisor, professor David Weir, for his enduring guidance, encouragement, criticism, and, supervision throughout the study.

I am particularily grateful to the Government of Iraq for their financial support.

I am indebted to the respondents who were very patient and cooperative despite their heavy duties and responsibilities, especially Mr. S. Zaman, the Manager of Personnel Records and Statistics in Pakistan International Airlines for his cooperation and assistance.

I should also thank my colleagues in the Doctoral Programme in Glasgow whose support and criticism were very constructive.

I am indebted to my dear little children, Mohammad, and, shahd, who gave me relief after long days of hard work.

Above all, it has been the patience, encouragement, and understanding of my wife, Eman, that has made this venture possible.

Contents

List of Figures

List of Tables

Chapter One

Introduction

1.1 Background

This chapter is an introduction to this study which examines the relationships between size of an organization and its organizational characteristics which include, structural differentiation, size of its administrative component, organizational culture, and the attitudes and the behaviour of its employees.

Over the past thirty years, substantial number of management scholars, economists, and industrial scientists have been involved in an argument about the impact of the organizational size and its management characteristics. This study presents an exploration of specific organizational postulates on a cross-cultural basis. It attempts to test their applicability in a developing country-Pakistan, in an organization which is considered to be one of the biggest organization in the country, which is Pakistan International Airlines (PIA).

1.2 Assumptions to be Tested

Size of organization is widely studied by students of organization, and in our review of the relevant literature, four types of associations between size and other organizational characteristics exist and have been emphasized. These associations are; 1. Association between size and structural differentiation; 2. Association between size and the relative size of the administrative component; 3. Association between size and employee's attitudes and behaviour; 4. Association between size and organizational culture.

In fact, very few attempts have been made to link both the structural-behavioural aspects of size together. The present study takes the stand to link the structural-behavioural aspects of size together. Therefore, this study suggests, that the literature available has some gap that needs to be filled.

Two major theoretical tasks to be included by this study, these are; 1. Establishment of the significance of the organizational variables, and, 2. Establishment of a theoretical model of the relationships which will be tested empirically.

The central questions to be answered and examined empirically by this study are as follows:

1. What are the impacts of size on the structural aspects?

   a. What is the nature of the association between the size of the PIA's departments and their structural differentiation (horizontal and hierarchical)?.

b. What is the nature of the association between the size of the PIA's departments and the relative size of their administrative component?.

c. What is the nature of the association between the structural differentiation and the relative size of the administrative component?.

2. What are the impacts of size to the behavioural aspects?.

a. What is the nature of the association between the size of the PIA's departments and the selected attitudinal patterns of their employees?.

b. What is the nature of the association between the size of the PIA's departments and the selected behavioural patterns of their employees?.

c. What is the nature of the association between the size of the PIA's departments and the selected organizational cultural patterns of the organization?.

d. What is the nature of the association among the attitudes and the behaviour of the employees and the organizational culture in PIA?

3. What are overall structural and behavioural implications of the size of the PIA's departments?.

1.3 Limitations of the Study

There are some limitations of the study which are as follows:

1. Most of the questions included in the questionnaires are based on a five point scale. This implies that respondents are forced to choose one of the five alternatives which may not reflect their opinion accurately.

2. The assignment of values for each of the five alternatives answers on the scale may be subjective and yield inaccuracies.

3. Some of the information requested by the researcher in regard to the structure were not released by PIA.

1.4 Structure of the Study

To cover the points mentioned earlier in this chapter, the thesis consists of several chapters. After this introductory chapter which aimed at familiarizing the reader with the importance of this study, its objectives, its structure, and its limitations, the study consists of the following chapters.

1.4.1 Organizations and Organization Theory

Chapter 2 explores the nature of the organizations and organization theory in order to provide an understanding of the usage of the organizational variables by the students of organization. This will include the exploration of the definitions of organization, different schools of thoughts regarding the organization theory, contingency theory, organizational typologies, levels of analysis, organizational goal, and organizational change.

1.4.2 Selected organizational Variables

Chapter 3 introduces the key variables of organizations and more emphasis will be put on the selected organizational variables which will be examined empirically in this study. This chapter will scan the relevant literature concerning the following variables, these are; 1. organizational variables-in general, 2. size of organization, 3. structural differentiation, 4. size of the administrative component, 5. attitudes and behaviour of the employees, and, 6. organizational culture.

1.4.3 Interrelationships Between the Organizational Variables

Chapter 4 considers the review of the literature in regard to the studies which have examined the relationships between size and organizational characteristics. Therefore, this study will present the studies which have examined the relationship between size and each of the following variables, 1. structural differentiation, 2. size of the administrative component, 3. organizational culture, 4. attitudes of the employees, and, 5. behaviour of the employees.

1.4.4 PIA and Its Context.

Chapter 5 and 6 are aimed to explore the PIA organization and its environment in order to give the reader sufficient idea about the organization and the Pakistan bureaucracy.

As for the PIA organization, its historical background, its major activities, its structure, and, analysis of its performance will be tackled in chapter 6. While for the Pakistan bureaucracy, chapter 5 will emphasis the following, 1. Introductory survey (which include; location, population, and area, recent history, climate, language, and, religion), 2. its economy, and, 3. the characteristics of Pakistan bureaucracy.

1.4.5 Research Design and Methodology

Chapter 7 is devoted to the statement of the problem of this study and the research design as well as the methodology. Regarding the statement of the problem, three types of relationships between the selected variables are our main interests. These are; 1.

structural relationships, which include the relationship between size and structural differentiation, and the relationship between size and administrative component. 2. behavioural relationships, which include the relationship between size and employee's attitudes, size and employee's behaviour, size and organizational culture, employee's attitudes and behaviour, employee's attitudes and organizational culture, and, employee's behaviour and organizational culture. 3. structural-behavioural relationships, which include the interrelationships among all of the above variables. An empirically derived model which attempts to explain the overall associations between our six variables is introduced and compared with the theoretically deduced model will be also emphasized.

1.4.6 Empirical Findings

Our empirical findings are presented in chapters 8, 9, 10, and, 11. Chapter 8 concentrates on the structural relationships. It analysis the relationships among the following variables, these are; 1. size of organization, 2. structural differentiation, and, 3. size of the administrative component.

Chapter 9 examines the organizational relationships, which include, the relationship between size and organizational culture. While chapter 10 considers the behavioural relationships which focus on the relationships among three variables, these are; 1. employee's attitudes, 2. employee's behaviour, and, 3. organizational culture.

Chapter 11 aims to investigate the relationships between the structural and behavioural aspects, in other words, to find the relationships and associations among organizational structure, administrative component, employees attitudes, employees behaviour, and, organizational culture.

Finally, our conclusions and suggestions concerning the conceptual and empirical aspects of the selected variables and their relationships will be presented in chapter 12.

Chapter Two

Organizations and Organization Theory

2.1 Introduction

The purpose of this chapter is to explore the nature of organizations and organization theory. This exploration, in our opinion, is essential for the understanding of the usage of the organizational variables (which will be utilized in this study) by the students of organization. In this context, seven issues will be included, these are; 1. Definitions of organization, 2. Organization as a closed-Open system, 3. Contingency theory, 4. Organizational typologies, 5. Levels of analysis, 6. Organizational goal, and, 7. Organizational change.

In the first issue, we will scan the relevant literature in regard to the definitions of an organization, more light will be shed on those suggested by Shimmin (1971), Blau and Scott (1963), Etzioni (1964), Schein (1970), Hall (1974), and Bedian (1980). In regard to the second issue, which is the organization as a close-open system, this chapter will concentrate on different schools of thoughts, these are, principles of management, scientific management, bureaucratic management, and the human relations. Third issue will be to review the work of other groups of contemporary researchers, working under the title "Contingency theory". Fourth issue will be to review the literature concerning the organizational typologies through the review done by Champion (1975). Next issue is dealing with one of the important and most confusing aspects of organization theory, which is the levels of analysis, by concentrating on the suggestions of Daft (1983). Sixth issue will deal with organizational goals, through works of Hage (1965) and Daft (1983). Finally, this chapter will deal with organizational change, which includes the activities which have to be completed in order to adopt changes of new ideas or behaviour in an organization and the strategies and techniques that will improve the probability of implementing any type of change.

2.2 On Organization

Organizations are hard to see, we can see their buildings, or their products, or their friendly employee. But the whole organization is vague, and may be scattered among several locations and we take it for granted that organizations are there because of the daily direct contact with different organizations.

In reviewing the definitions of organizations, more light will be shed on those suggested by Shimmin (1971), Blau and Scott (1963), Etzioni (1964), Schein (1970), Hall (1974), and Arthur G. Bedian (1980). The focus will

Hall (1974), and Arthur G. Bedian (1980). The focus will mainly, however, be on these particular writers since they cover both formal and informal organizations.

Shimmin (1971:13) suggests that:

> "Although each of us has first-hand experience of them....they are not so easily defined. indeed, some writers argue that it is more helpful to cite specific examples than to try to define the term."

She goes further to add that:

> "Other writers have used a similar approach by asking people to compare a social gathering, such as a cocktail party, with a work department of an industrial enterprise in order to discover the distinguishing features of an organization."

Blau and Scott, on the other hand, (1963:2) state that:

> "Social organization refers to the ways in which human conduct becomes socially organized, that is, to the observed regularities in the behaviour of people that are due to the social conditions in which they find themselves rather than to their physiological or psychological characteristics as individuals".

Etzioni (1964:3) argues that the characteristics of formal organizations as (i) divisions of labour, power, and communication responsibilities divisions which are not random or traditionally patterned, but deliber planned to enhance the realization of specific goals, (ii) the presence of one or more power centers which control the concerted efforts of the organization and direct them toward its goals, these power centers also its structure, where necessary, to increase its efficiency; (iii) sub-others assigned their tasks, while Schein (1970:8-9) stated four main characteristics of formal organizations. These are: (i) rational coordination of efforts, (ii) the existence of some common goals or purpose, (iii) division of labour, and (iv) hierarchy of authority.

Hall (1974:7-9) on the other hand stated his definition as:

> "An organization is a collectivity with a relatively identifiable boundary, a normative order authority ranks, communications systems, and membership coordinating system, this collectivity exists on a relatively continuous basis in an environment and engages in activities that are usually related to a goal or a set of goals."

Bedian (1980:4) defined organizations as:

> "Social entities that are good-directed, deliberately structured activity systems with an identifiable boundary."

The above definitions have four common elements. These are; (i) social entities, (ii) goal-directed, (iii) structured activity system, and (iv) identifiable boundary. In fact all the Organizations are considered to be either as a closed system or open system. These are discussed below.

2.3 The Organization As a Closed-Open System

Organizational arrangements and decisions are geared to achieve certain aims and are directed towards making the organization more and more rational in the pursuit of its goal. This perspective is traditionally tied to Max Weber's early writing on bureaucracy.

In Weber's ideal type of bureaucracy, the goals and purposes are clear and explicit. Organizational rules, procedures, and regulations are derived from the goals.

The tasks to be performed in the achievement of the goal are subdivided among the members of the organization so that each member has a limited sphere of activity that is matched to his own competency. Positions are arranged in a pyramidal hierarchy, with each position having more authority than those below it.

Katz and Kahn (1966:18) have suggested that closed-system models rely almost wholly upon processes within organizations to account for organizational behaviour, while open-system models, on the other hand, stress the interrelations of organizations with their environment and seek explanations of organizational behaviour among factors outside of immediate organizational boundaries.

The early literature focused on formal structure, the documented, official relationship among members of the organization. Two schools of thought dominated the literature until 1950, one preoccupied with direct supervision, the other with standardization, the first school of thought,'the principles of management', fathered by Henri Fayol, was concerned with formal authority, in effect with the role of direct supervision in the organization.

Among the writers of this school are Gulick and Urwick, they popularized the terms, unity of command, scalar chain, and span of control.

The second school of thought which preoccupied with standardization, includes two groups. They are (1) Scientific Management led by Fredrick Taylor, and, (11) Bureaucratic led by Max Weber.

The observations of the presence of informal structure led to the establishment of a third school of thought in the 1950s and 1960s called "human relations".

Katz and Kahn (1966:19-26) suggested the following common characteristics for open-system perspective; (i) the importation of energy, new supplies of energy in to the organization in the form of people and materials are supplied by other organizations or the general environment; (ii) the through-put, means that the work which is done in the organization; (iii) the output, whatever emerges from an organization is utilized, consumed, rejected,...etc., by the environment; (iv) system as cycles of events, products sent into the environment are the basis for the source of energy for the repeating of the event; (v) negative entropy, organizations attempt to import more energy than they expand, in order to be stock piled to avoid the condition of using more energy than is imported; (vi) information input, negative feedback, and the coding process. The information coming into an organization is coded and selected so that the organization is not in undated with more than it requires. The information provides signals from the environment, and negative feedback indicates deviations from what the environment desires; (vii) The study state and dynamic homeostasis, systems tend to maintain their basic character, attempting to control threatening external factors; (viii) Equifinality, multiple means to the same goals exist within organization.

Champion, (1975:28-29), has reclassified the Stogdill's basic eighteen premises and orientations in theories of organization as it shown in the following table (1.1) below.

Table 2.1: A Reclassification of Stogdill's Organizational Orientations.

Closed-System Orientation	Open-System Orientation
1. Organization as an independent Cultural agency.	1. Organization as a Product.
2. Organization as a system of agent of Structures and functions	2. Organization as an agent of exchange with its Environment
3. Organization as a structure in action over time.	3. Organization as an input-output system.
4. Organization as a processing system.	
5. Organization as a system of dynamic functions.	
6. Organization as a structure of sub-groups.	

Source: Champion, D. " The sociology of organization", McGraw-Hill Book Company, New york 1975.p.29.

From these classification, the main aspect which could be distinguished between the two systems is that the open-system models consider the external factors, while the close-system does not.

Daft, R. (1983) distinqueshed between closed-open systems, he (1983:8) stated that

> " A close system does not depend on its environment; it is autonomous, enclosed, and sealed off from the outside world. It has all the energy it needs, and can function without the consumption of external resources, ...An open system must interact with the environment to survive; it both consumes resources and exports resources to the environment. Open systems can be enormously complex."

He (1983) further added that

> " The closed-system approach to organizations is not really incorrect, but it is not complete."

2.4. Contingency Theory

Other group of contemporary researchers, working under the title "Contingency theory" have been investigating the relationships between structure and situation. They opposed the notion of the one ideal form of structure.

Daft, R., (1983:21) stated that:

> " Contingency means that one thing depends upon another thing, or what one characteristic depends upon another characteristic what works

> in one setting may not work in another setting. There are universal principals that apply to every organization. There is not one best way. Contingency theory means " it depends". The most efficient organization structure may be contingent upon the organization's size and technology."

Joan Woodward is one of the first researchers, who in her study of the industry (1965) in one region of U.K. found the relationship between technology and structure. Another group of researchers led by Pugh found (1976), the relationship between size of organization and its structure. They (1976:12) found that size of the organization best explained many of the characteristics of its structure .

He (1968:65-91) listed the types of the organizational dimensions, as structural, and contextual. For the structural dimensions which pertain to internal characteristics of organization, include the followings:

1. Formalization : It pertains to the amount of written documentation in the organization. Documentation includes procedures, job descriptions, regulations, and policy manuals.
2. Standardization : It is the extent to which similar work activities are performed in a uniform manner.
3. Specialization : It is the degree to which organizational tasks are subdivided.

4. Centralization : It refers to the hierarchical levels that has authority to make a decision.
5. Complexity : It refers to the number of activities or sub-systems within the organization.

While for the contextual dimension, he stated three, these are:

1. Size : It refers to the number of people in the organization.
2. Technology : It refers to the nature of the task in the production system, and includes the actions, knowledge, and techniques used to change inputs into outputs.
3. Environment : It includes all the elements outside the boundary of the organization, such as; industry, government, customers, and suppliers.

Al-Eshaiker, A.H. (1983), argued that the external and internal environment of the organization are the source of many variables which influence the organization directly or indirectly. An organization is said to be more effective if it can respond to these variables by adjusting to or controlling their demands.

He (1983), further added that the contingency approach provides for the scanning and identification of these variables and even forecasting them and estimating the potential for adjustment and control.

Bird and Schoonhoven (1981:349-377) stated five problems with contingency theory. These problems are; 1. Lack of clarity, i.e. in order to be most effective, organizational structures should be appropriate to the work performed and/or to the environmental conditions facing the organization. Although the overall strategy is reasonably clear, the substance of the theory is not clear. 2. Contingency relations as indicators, i.e. when contingency theorists assert that there is a relationship between two variables (dimensions of technology and structure, for example) when predicts a third variable (organizational effectiveness), they are stating that an interaction exists between the first two variables. 3. Functional forms of interaction, i.e. because of a lack of clarity, theoretical statements also fail to provide any clues about the specific form of the interaction intended. The mathematical function of the implied interaction between structure and technology (or environment) is seldom made explicit. One consequence of this lack of specifity is that the mathematical function implied by the verbal theory may be represented in practice by a function that has quite different properties. 4. The analytic model used, i.e. the operational and computational procedures that researchers tend to use impose assumptions on an already imprecise conceptual frame work. Because of the tendency to rely on the general linear model and correlational procedures, the relationships studied within the contingency frame work are typically assumed to be linear. Finally, 5. Assumptions about contingency relationships, i.e. an assumption of symmetrical effects is hidden in the language of contingency theory. Often contingency arguments suggest that lower values of a dimension of structure, when coupled with lower values of technological (or environmental) uncertainty, should produce effective organizations. An implication of this argument is that if, instead, high values of structure are combined with low values of technology, or vice versa, then effectiveness will be impaired because no congruence exist between technology and structure. This symmetrical property of contingency theory arguments is important because it suggests a non monotonic effect of structure on effectiveness over the range of uncertainty, rather than the usual assumption that an effect is constant over all values of the independent variable.

Certain differences exist among types of Organizations which are discussed below.

2.5. Organizational Typologies

A few attempts to develop organization typologies have been reported in the literature on organizational theory. Champion (1975) argued that:

> "typologies are ways of describing or labeling differences among organization. Certain

> relationships among variables may be true within one type of organization but not necessarily within another."

He (1975:66-75) summarized different organizational typologies, as follows: (i) The Hughes typology; (ii) The compliance typology; (iii) The prime-Beneficiary typology, and, (iv) The general-function typology.

As far as the Hughes typology is concerned, he (1952) identifies five different kinds of organizations which are characteristic of contemporary society, these are, (i) Voluntary associations (e.g. the American sociological Association, and the catholic church); (ii) Military organizations (e. g. the U. s. army, and military academies); (iii) Philanthropic organizations (e.g. universities, hospitals, and research institutions); (iv) Corporation organizations (e.g. I.B.M., general motors, and the bank of America); and (V) Family business organizations (e.g. small business).

The second kind of the organizational typology is the Etzioni's (compliance) typology, which include three types of compliance relations, these are, (i) Coercive, (ii) Remunerative, and (iii) Normative.

Other kind of typology is the prime-beneficiary typology which is created by Blau and Scott (1962) based upon the principle of who benefits by the particular organizational activity. This kind of typology include four types of organizations, namely, (i) Mutual-benefit (the prime beneficiaries are, members of labour unions or clubs...etc.), (ii) Business (the prime beneficiaries are, owners or managers of the industrial firms or banks or business), (iii) Service (the prime beneficiaries are clients of social work agencies or hospitals or schools....etc.), and (iv) Commonweal (the prime beneficiaries are the general public of the military services or police or fire departments....,etc).

The genotypical-functions typology which include, (i) Productive or Economical organizations (e.g. manufacturing plans, transportation facilities...etc), (ii) Maintenance organizations (e.g. Schools, Churches,..etc), (iii) Adaptive organizations (e.g. Universities, Research laboratories....etc), and (iv) Managerial- Political organizations (e.g. National, State, and, Local governmental agencies...etc).

Finally, Mintzberg, H. (1979:299-465) proposed five types of organizations, these are;

1. Simple structure : It is typically a new, small. The organization consists of a top manager and workers in the technical core. Only a few support staff are required, a loose division of labour, minimal differentiation among its units and a small managerial hierarchy. There is little specialization or formalization. Coordination and

control is from the top, where power and influence are located.

2. Machine Bureaucracy : It is highly specialized, routine operating tasks, very formalized procedures in the operating core, a proliferation of rules, regulations, and formalized communication throughout the organization, large sized units at the operating level, relatively centralized power for decision making.

3. Professional Bureaucracy : The distinguishing feature of professional bureaucracy is that the production core is composed of professionals such as in hospitals, and in universities. It relies for coordination on the standardization of skills and its associated design parameter, training and indoctrination. It hires duly trained and indoctrinated specialists, professionals for operating core.

4. Divisionalized form : It is extremely large, and subdivided into product or market groups. It relies on the market basis for grouping units at the top of the middle line.

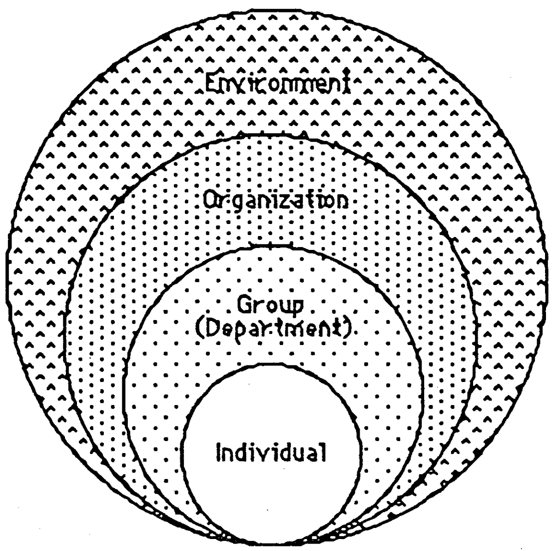
5. Adhocracy : It is highly organic structure, with little formalization of behaviour, high horizontal job specialization. The technology is normally sophisticated as in the electronic industries.

One of the important and most confusing aspects of organization theory is the level of analysis, which is discussed below.

2.6. Levels of Analysis

Daft, (1983:22-24) suggested four levels of analysis normally characterize organizations, these are; 1. the individual human being, 2. group or department, 3. organization, and, 4. environment. Figure 2.1 below shows these levels of analysis in organizations.

Figure 2.1.: Levels of Analysis in Organization



Source : Daft, R.L. " Organization Theory and Design"
West Publishing Company, 1983, pp. 22-24.

He described these levels and argued that the first level is the individual human being and represent the basic building block of organization. The next higher system level is the group or department which include the collection of individuals who work together and interact to perform subsystem tasks. The next level of analysis is the organization itself which is a collection of groups or departments that combine into the total organization . Organizations themselves can be grouped together into the next higher level of analysis, which is the environment or the community.

In fact, these levels are important, but in order to explain the organization, we should not only look at its characteristics, but also at the characteristics of the environment and of the departments and groups that make up the organization. Organizations are tools that·the management use to achieve certain goals, following is a discussion on these goals.

2.7. Organizational Goal

Without some purpose, there is no need for the organization. Organizational goals summarize and articulate that purpose specially in the case of "not for profit" organizations. The management identifys goal, for the reason to provide legitimacy for the organization, a sense of direction and decision guidelines, criteria of performance, and reduction of uncertainty.

Hage (1965:289-320) considered four organizational goals, they are, (i) adaptiveness, which is measured by the member of new programmes per year and the number of the number of new programmes per year and the number of new techniques adapted per year; (ii) effectiveness,which is measured by the number of units produced per year and the rate of increase in number of units produced per year, (iii) efficiency, which is measured by the cost per unit of output per year and the amount of idle resources per year, (iv) satisfaction, which is measured by the employees's satisfaction with working conditions and by the rate of turnover in job occupants per year. He (1965:293-294) further stated four means to achieve the above goals, these are, (i) specialization, which is measured by the number of occupational specialties and the level of training required for them, (ii) centralization, which is measured by the proportion of occupations or jobs whose holders participate in decision-making, (iii) formalization and standardization, which involves the number of jobs that are codified and the range of variation allowed within jobs, (iv) stratification, which is measured by the differences in income and prestige among jobs and rate of mobility between low-and high-ranking jobs or status levels. In fact, Hage's approach is considered to be a closed-system approach because, the means to achieve the organizational goals are stated.

Daft, (1983:84-87) distinguished two types of goals exist in organizations, these are, 1. official goals, which are formally defined outcomes that the organization should state what is doing to achieve. It reflects what the organization should be doing, the reason it exists. 2. operative goals, which represent the real and the actual goals of the organization. Daft (1983), suggested five types of operative goals, these are; 1. environmental goals, 2. output goals, 3. system goals, 4. product goals, and 5. sub-unit goals.

Organizations are not static, they are subject to change due to change in environmental, social, political, economical and technical aspects.

2.8. Organizational Change

Organizational change simply is the change in policies and in the behaviour of an organization. Daft (1983:129-166) stated five activities have to be completed in order to adopt the change of new ideas or behaviour in an organization, these activities are :

1. Need : a need for change occurs when managers are dissatisfied with current performance.
2. Idea : ideas are new ways of acting things, they may be models, concepts, or plans that can be implemented by the organization.
3. Proposal : a proposal occurs when someone within the organization requests the adoption of a new behaviour, idea, or technique.
4. Decision to adopt: a decision occurs when the

organization makes a choice to adopt the proposed change.

5. Resources: human force and activity are required to bring about change. An employee has to perceive both the need and the idea to meet that need because, change does not happen on its own and it requires resources.

Daft (1983:265-284) divided the organizational changes into four types, these are; 1. technology change, which are designed to make the transformation process more efficient or to produce greater volume. These changes involve new techniques for making products or services. 2. product changes, which include small adaptations of existing products, or entirely new product lines. These changes are normally designed to increase the market share or to develop new markets, customers, or clients. 3. administrative changes, which include changes in organization structure, goals, policies, reward systems, labour relations, management information systems, and accounting and budgeting systems. and 4. people change, which means changes in the attitudes, skills, expectations, and behaviour of employees, improvements in communications, problem solving, and planning skills of managers.

Daft (1983:284-287) suggested six strategies and techniques that will improve the probability of initiating and implementing any type of change successfully, these are; 1. Diagnose a true need for situation is needed to determine the extent of the problem. 2. Find an idea that fits the need, which include search procedures, talking with other managers, assigning a task force to investigate the problem, sending out a request to suppliers, or asking some one within the organization to create a solution. 3. Obtain top management support; for small changes, the support of influential managers in the relevant departments is required, while in the massive changes, such as a structural reorganization, the president and vice president must give their support because the lack of top management support is one of the most frequent causes of implementation failure. 4. Design the change for easy implementation; implementation is easiest when the change is designed to provide high benefits in the form of profit or improved performance for the user. The prospects for success are also improved when the change can be broken into subparts and each part adopted sequentially. 5. Plan to overcome resistance to change; the most difficult part of any change is implementation. No matter how impressive the performance characteristics of an innovation, its implementation will conflict with some interests of others. To increase the chance of successful implementation, management must acknowledge the conflict, threats, and potential losses perceived by employees. Several strategies can be used by managers to overcome the resistance problems, such strategies are; a.

overcome the resistance problems, such strategies are; a. Change meets a real need. b. Participation, and, c. Open communication. and, 6. Assign an idea champion; an effective strategy is to assign an individual or small committee to be responsible for the phases of initiation and implementation.

2.9 Summary

The main purpose of this chapter has been the exploration of the nature of the organization and organization theory, which leads for the understanding of the usage of the organizational variables by the students of organizations. For this purpose, the study has included the definitions, different schools of thoughts of organizational theory, contingency theory, typologies, levels of analysis, and organizational goal and change.

Regarding the definitions of organizations, it has been suggested that most of the definitions have four common elements, these are; 1. social entities, 2. goal-directed, 3. structured activity system, and 4. identifiable boundary.

Followers of closed-system approach believe in the ideal type of bureaucracy, and according to them, organizations are independent agencies, while in the open-system there is no ideal type of bureaucracy and organizations are as cultural products and an agent of environment. While according to the contingency theory, the external and internal environment of the organization are the sources of many variables, which influence the organization directly and indirectly. According to the contingency theory, there are five important structural dimensions, these are; 1. Formalization, 2. Standardization, 3. Specialization, 4. Centralization, and, 5. Complexity., and there are three important contextual dimensions, these are, 1. Size of organization, 2. Technology, and, 3. Environment.

Our examination of the typologies of organizations indicated that there are two main criteria have been utilized in differentiating between types of organizations, these are; 1. Goals of organizations, and, 2. Functions of organizations.

For the levels of analysis in organization, our study indicated that there are four main levels of analysis in organizations, these are; 1. The individual human being, 2. Group or department, 3. Organization, and 4. Environment.

As for the organizational goals, two main types of goals indicated in our study, these are; 1. Official goals, which are formally defined outcomes that the organization should state be doing to achieve, and, 2. Operative goals, which represent the real and the actual goals of the organization. Finally, in examining the organizational change, there are five activities have to be completed in order to adopt the change of new ideas or behaviour, these are; 1. Need, 2. Idea, 3. Proposal, 4. Decision to adopt, and, 5. Resources. Our study also indicated four types of organizational change, these are; 1. Technology changes, 2. Product changes, 3. Administrative changes, and 4. People changes.

Chapter Three

Organizational Variables

3.1 Introduction

This chapter is devoted to highlight the key variables of organization. More emphasis is put on the selected organizational variables used in this study. In this context, this chapter focuses on the review of the literature in connection to the organizational variables. Six issues are included in this chapter, these issues are; 1. Organizational variables - in general, 2. Size of organization, 3. Structural variables, 4. Size of the administrative component, 5. Employee's Attitudes and behaviour, and, 6. Organizational culture.

Regarding the first issue, which is the organizational variables, this study will scan the relevant review of literature concerning this aspect in general. As for the second issue, which is the size of the organization, this study focuses on the definitions of size, and the differentiated aspects of size of organization, which are; 1. the physical capacity of an organization, 2. the personnel available to an organization, 3. organizational inputs or outputs, and, 4. discretionary resources available to an organization. In examining the third issue, which is the structural variables, this chapter presents the definitions of social organization, formal and informal organization, and organizational structure. In addition, this study examines the differentiation in social and organizational structure, which include, horizontal and hierarchical differentiation. As far as the examination of the fourth issue, which is the size of the administrative component, is concerned, this study emphasis the definitions as well as the measures. For the fifth issue, which is the attitudes and behaviour of the employees, this chapter includes the sources of attitudes and behaviour, as well as their functions. Finally, in examining the last issue, which is the organizational culture, this study focuses on the definitions as well as the key variables of the organizational culture.

3.2 Organizational Variables

Researchers normally face a difficult task of selecting the relevant variables. By concentrating on organizational analysis, Argyis (1960:6) described the difficulties facing researchers in his statement:

> "What are the relevant variables in studying organizations and how are they related to cause the phenomena under study? How is one to understand a pattern of variables whose interdependence is highly complex? These are

> extraordinarily difficult questions to answer. The variables are so numerous and the interrelationships so complex that one must be careful lest he miss the very complexity that is so characteristic of organizations".

Indeed this statement is very important for every researcher studying organizations. And in view of such complexity, most researchers of organization tend to classify variables into broad categories.

Champion (1975) distinguished between three types of variables; these are (i) organizational variables; (II) interpersonal variables; and (iii) individual variables. He (1975:108) emphasized such a distinction in that:

> "Variables designated as "interpersonal" are characteristics of employee's work group in organizations. These are not necessarily typical of the organization as a unit. Neither do they describe individual behaviours adequately".

Champion (1975:86) argued that although the organizational variables (as he listed them) tend to overlap one another to varying degree, four distinct subdivisions could be specified. These are: (i) organizational structure, (ii) organizational control, (iii) organizational behaviour, and (iv) organizational change. According to his classification, three variables pertaining to structure; these are (i) size, (ii) change. According to his classification, three variables pertaining to structure; these are (i) size, (ii) complexity or differentiation, and (iii) formalization. Champion (1975;88) associated four variables with the control dimension of an organization; these are: (i) size of the administrative component, (ii) bureaucratization and debureaucratization, (iii) centralization and decentralization, and (iv) levels of authority (including span of control). Champion (1975:92) associated three variables with the organizational behaviour, these are, (i) organizational climate, (ii) organizational effectiveness, and (iii) organizational goals. He (1975:98) associated six variables with organizational change, these are; (i) labour turnover, (ii) organizational conflict, (iii) organizational flexibility, (iv) organizational growth, (v) administrative succession, and (vi) technology (including automation).

Champion (1975:108) selected three interpersonal variables; these are: (i) uniformity or similarity of values, (ii) group cohesion, and (iii) supervisory methods.

Champion (1975:112) classified the individual variables as; (i) attitudes of members, (ii) job characteristics, and (iii) definitions and performance of roles.

Using Champion's (1975) classification of the general categories, i.e., organizational, interpersonal, and individual variable. Among the organizational variables, two structural variables will be selected, namely, (i) size of organizations and (ii) structural differentiation. And also the size of the administrative component (a control variable), organizational culture (a behavioural variable), uniformity or similarity of values (an interpersonal variable), attitudes of members (an individual variable).

3.2.1 Size of Organizations

Broadly speaking, almost from the beginning of the study of organizations by sociologists, size has been seen as one of the critical aspects of organizations and has been widely discussed in the early sociological literature. Kimberly (1976:571) noticed that the number of studies of the size of organization has been doubled every five years for the past twenty years. He (1976:571) recorded that between 1950-1974 some 80 empirical comparative studies of size and organizational structure were published.

Hall (1974:110) noted that:

> "size is obviously the number of employees in an organization. Or is it? This is an adequate definition only in those cases where the organization is composed solely of full-time paid employees. The issue is much more complex,

> however, when volunteer and / or part-time personal comprise a major part of an organization".

Blau (1972:3) defined size as:

> "Is the scope of an organization and its responsibilities".

While Aldrich (1972:30) defined size as:

> "Is scale of operations".

Pondy (1969) on the other hand considered size as:

> "A factor of production".

According to Kimberly (1976:575), there are two competing conceptual definitions of size, one is related to American School, the other is to English School. He (1976:575) stated that:

> "On a different level, there are two competing conceptual definitions of size in the research review. One answer, coming largely from, although not limited to, many of the neo-Weberian structuralists in the united states, is that size is a structural characteristic of an organization. This view can be found, for example, in the work of Mayer (1972), where size is considered to be one of several structural properties of an organization. It is also implicit in Hall's (1972) discussion as, "size" appears as the first chapter in that section of

his book entitled 'Organizational Structure"

He (1976:575) added that:

> "a second answer, coming primarily from the work of Pugh and colleagues, the Aston group, and Child in England, is that size is one of several dimensions of an organization's context. Others include history, charter, technology, status, ownership, and number of operating sites. In this view, size is one of a number of constraints which together determine the particular structure of configuration an organization is likely to exhibit".

In stating the differentiated aspects of size of organizations, Kimberly (1976:587) argued that:

> "the following four are suggested as substantially important aspects of organizational size, and have been derived from the various operational definitions that have appeared in the literature".

These four aspects are: (i) the physical capacity of an organization, (ii) the personal available to an organization, (iii) organizational inputs or outputs, and (iv) the discretionary resources available to an organization. These four aspects are discussed below.

3.2.1.1 The Physical Capacity of An Organization

According to Kimberly (1976:587):

> "This aspect of size takes into account the fact that at any particular point in time there are constraints imposed on most, if not all, organizations by their physical size".

He (1976:587) specified three common measures of the physical capacity aspect of organizational size; these are: (i) the number of beds in studies of hospitals, (ii) the number of cells in a jail, and (iii) the square footage available for different kinds of organizational activity.

Kimberly (1976:587) further added that:

> "Although it is recognized that these measures may be strongly influenced by such variables as technology, they are independent and represent an important and distinct aspect of size".

3.2.1.2 The Personnel Available to An Organization

Kimberly (1976:587) argued that:

> "this aspect of size takes into account the fact that at any particular time an organization has a finite number of people available to do its work".

He (1976:587) stated that:

> "It is the most commonly used measure in the literature, with more than 80 percent of the studies (he) reviewed here using it, in one form or another, as the basic measure of size".

Kimberly (1976:587) argued that:

> "Thus, while it is a measure that is relevant in the sense that it is available for all organizations and is attractive to researchers on that basis alone, care must be taken in comparative research not to imput the same substantive role to an empirical quantity whose contextual significance may vary".

He (1976:587) differentiated between the number of employees in an organization with the physical capacity of that organization. In this regard he stated that:

> "The number of employees available to do an organization's work is not the same thing as the physical capacity of the organization in which the work is carried out, and that while the two maybe frequently related empirically, they are conceptually distinct".

Reviewing the various operational definitions of the personnel available to organization in the literature, it is indicated that there are two terms used by the researchers, first, in term of organizational employees and second, in term of organizational members. It can be noticed that those two terms of organization are not synonymous; the latter is broad enough to incorporate voluntary and other mutual-benefit type of organization.

Examples of studies which have examined the association between the size of organizations in terms of the personnel available to them and the structural differentiation, we notice that the number of employees has been the most utilized measure, such studies are by; Hall et al.(1967), Pugh et al. (1969), Blau and Schoenherr (1971), Meyer (1972), and Goldman (1973).

Similarily, the studies which have explored the association between the size of organizations in terms of the personnel available to them and the relative size of their administrative component, it is evident that the number of employees has been the most utilized measure, such studies are by; Caplow (1956), Dubin (1958), Rushing (1967), and Pondy (1969).

Scanning the relevant literature by exploring the studies which have examined the relationship between the size of organizations in terms of the personnel available and the attitudes and behaviour of the people, the term employees has been used as a measure of size of organizations, such studies by: Talacchi (1960), Ingham (1970). On the other hand, the term 'member' as the measure of organizational size has been used in the studies which have focussed upon the mutual- benefit type of organizations, such studies are by, Akers (1970 in occupational associations), and Hinings and Foster (1973 in churches).

Summing up the argument regarding the utilization of the personnel available to organizations as a measure of organizational size, it has been demonstrated that it is largely envisaged in terms of 'employees' and as 'members'.

3.2.1.3 Organizational Inputs or Outputs

Kimberly (1976:588) argued that the organizational inputs is another aspect of size found in the literature and sometime is the organizational outputs is used for the same purpose. He (1976:588) stated that:

> "It is important in so far as it reflects the amount of activity to which the core technology of the organization is exposed in a given period of time".

He stated some examples of organizational input which include; number of clients seeking or accepted for services per unit time; number of students enrolled in educational institutions; and number of persons incarcerated in (prisons or jails). He further added that the use of sales volume would be the measure of the organizational output.

3.2.1.4 Discretionary Resources Available to An Organization

Kimberly (1976:588) argued that this aspect of size determines:

> "The magnitude of the discretionary resources that are available at a given time. These resources have been measured both in terms of organizational wealth and net assets".

In this study, we believe that, Kimberly's above view regarding the size, is not applicable for all kinds of organizations.

Kemberly, however, emphasized two terms by which the discretionary resources could be measured, these are: wealth and net assets, which might be applicable only in business organizations.

Within the context of such literature, it could be argued that the number of employees of an organization has been correlated with various indicators of their inputs or outputs. A number of works have studied this; such as: Hawley et al (1965) with number of students; Anderson and Warkov (1961) with average daily patient load in hospitals; Newbould and Wilson (1977) with sales turnover.

The number of employees has been correlated with a number of the indicators of the organization's discretionary resources, examples of such studies are by; Battes (1965) with net assets; Pugh et al (1969) with net assets; Bates with total assets; Newbould and Wilson (1977) with net cash flow.

To conclude, there are four aspects for size of organization; these are: (i) the physical capacity of an organization, (ii) the personnel available to an organization, (iii) organization inputs or outputs, and (iv) the discretionary resources available to an organization. Although the four aspects of size identified by Kimberely have been shown to be highly correlated (Child,1973), Kimberly nevertheless argued that they have conceptually distinct significance for organization structure. For example, he indicated that personnel available are likely to be the most relevant to the issues of social control, whereas physical capacity and activity volume are more relevant for problems of work structure (e.g., differentiation and specialization).

3.2.2 Structural Variables (Differentiation)

In defining the structure of a social system, Parsons (1951:25) suggests that:

> "Since a social system is a system of processes of interaction between actors, it is the structure of the relations between the actors as

> involved in the interactive process which is essentially the structure of the social system. The system is a network of such relationships".

In his definition Parsons emphasized the relationships between the actors and, what he called, the structure of the social system.

Blau and Scott (1963:3) stated that the:

> "Social relations involve, first, patterns of social interaction: the frequency and duration of the contacts between people, the tendency to initiate these contacts, the direction of influence between persons, the degree of cooperation, and so forth. Second, social relations entail people's sentiments to one another, such as feelings of attraction, respect, and hostility. The differential distribution of social relations in a group, finally, defines its status structure. Each member's status in the group depends on his relations with the others-their sentiments toward and interaction with him".

In spite of the relevant distinctions between formal organizations and social organizations, some of the researchers uses the relevant aspects of social structures in their definition of organizational structure. Such researchers as Bowey (1976), she suggested that:

> "The social structure is a potential pattern for interactions in the organization, and not the

> patterned actions themselves. It is comprised of meanings, interpretations, perceptions, aims, interests, and expectations held by individuals in reaction to other individuals. An important point here is that whilst this 'social' structure results in certain patterned behaviours, there are other non-social factors in organizations which may also be perceived to affect them in such a way as to produce patterns of behaviour".

In addition, she noted some of the non-social factors, such as, written rules and procedures, technical systems, physical objects, physical layout, and payment systems.

Regarding organizational structure, Pugh (1971:13) stated that:

> "All organizations have to make provision for continuing activities directed toward the achievement of given aims. Regularities in activities such as task allocation, coordination and supervision are established which constitute the organization structure".

Gibson et al. (1976:226-27) described the structure of organization as:

> "Relatively fixed relationships that exist among the jobs in the organizations. The fixed relationships result from the decision process which undertakes the following; job definition, departementation, span of control, and delegation".

Mintzberg, H. (1983) defined the structure of an organization as:

> "The sum total of the ways in which its labor is divided into distinct tasks and then its coordination is achieved among these tasks"

In examining the relevant literature regarding differentiation in social and organizational structure, we will trace the origin of the concept in both the social and organizational contexts.

Bornstein (1970:22-24) defined the concept of social differentiation in sociological terms as:

> "It refers to most commonly to the proliferation and specialization of roles, which occurs through the modification of existing roles and the creation of new roles by individuals and groups...Thus differentiation can be characterized as the development from diffuse and multi-purpose roles to specific single-purpose roles".

He (1970:23-24) further added that:

> "There is broad agreement that a general relationship-or certain general relationships-exist between the processes of differentiation in various areas of social structure such as the division of labour, social stratification, and the formalization of pressure groups".

In that argument Bernstein examined the implication of social differentiation. On the other hand, Blau

(1974:301) specified the various dimensions of differentiation as:

> "A dimension of differentiation is any criterion on the basis of which the members of an organization are formally divided into positions, as illustrated by the division of labour; or into ranks, notably managerial levels; or into sub-units, such as local branches, headquarters divisions, or sections within branches or divisions. A structural component is either a distinct official status (e.g. first-line supervisor) or a sub-unite in the organization (e.g. one branch or one division). The term differentiation refers specifically to the number of structural components that are formally distinguished in terms of any one criterion".

Generally speaking, organizational researchers refer to the differentiation in organizational tasks as 'horizontal differentiation'; to the differentiation in organizational status as 'vertical (hierarchical) differentiation"; and to the spatial dispersion of organizational tasks and status as 'spatial dispersion'.

In defining 'horizontal, vertical, and spatial dispersion' differentiation, we will refer to the arguments by Hall (1974:143), Pugh et al, (1969), Blau and Schoenherr (1971), Meyer (1972), Hinings and Foster (1973), Goldman (1973), and Dewar and Hage (1978).

Hall (1974:143) stated that:

> "Horizontal differentiation is the way the tasks performed by the organization are subdivided among its members".

Pugh et al. (1969) and Hinings and Foster (1973) used the term 'specialization' as indicator of horizontal differentiation; Goldman (1973) used the term 'number of divisions' as an indicator, while Meyer (1972) used the term 'number of sub-units' as an indicator. Hage (1965), on the other hand, used the terms 'number of occupational specialties and the length of training required by each' as indicators of horizontal differentiation; while Hall et al. (1967) used the terms 'number of goals and presence of second major activity and specific division of labour' as indicator; Blau and Schoenherr (1971) used the terms, number of divisions, number of sections within divisions, and number of occupational positions, as indicators of horizontal differentiation.

Hierarchical (vertical) differentiation is usually used to describe the shape of the hierarchy (flat or tall). As for its (vertical differentiation) measurement, Hall et al. (1967), measured it by using:

> "The mean number of levels for the organization as a whole".

while Pugh et al. (1968-78) measured the vertical differentiation by:

> "A count of the number of job positions between

> the chief executive and the employees directly working on the output".

Goldman (1973:93), on the other hand, measured hierarchical (vertical) differentiation in terms of:

> "The number of levels-number of hierarchical reporting steps from sales person to top executive".

Third dimension of structural differentiation is 'spatial dispersion'. Hall (1974:147) argued that:

> "Spatial dispersion becomes a separate element (in structural differentiation) when it is realized that an organization can perform the same functions with the same division of labour and hierarchical arrangements in multiple locations".

Hall et al. (1967:906) made use of the spatial dispersion in terms of:

> "The degree to which physical facilities are spatially dispersed; the location of spatially dispersed, and the location of spatially dispersed personnel".

In conclusion, the structural differentiation has been manipulated by organizational researchers in terms of three dimensions. These are, horizontal and vertical differentiation, and spatial dispersion, they are associated and linked to tasks, authority status, and territory, respectively.

3.2.3 Size of Administrative Component

One of the important problems in any organization is the coordination of the various activities which occur within it. This coordination function is normally performed by the administrative component of the organization. The coordination of activities is alleged to become relatively more difficult with an increase number of personnel and with a greater variety of role activities or tasks.

Campbell and Akers, (1970:437) defined the administrative component as:

> "that part of an organization charged with coordinating, facilitating, and supporting the activities of the rest of the organizational participant".

They (1970) added that in corporate organizations, such as industrial firms, the absolute size of the administrative component usually refers to the number of managerial, sales, clerical, and professional-technical employees. In educational institutions these are principles, superintendents, chairmen, deans, presidents, and other officials along with their staff. The relative size of the administrative component is the ratio of administrative to other employees.

The term 'administrative component' usually used to specify those undertaking the second activity. Haas et al. (1963:9) stated that:

> "Organizations, as goal oriented, social entities, have activities which are centrally and immediately crucial for goal achievement. They are also faced with the necessity of maintaining other activities which are less directly related to the attainment of organizational goals. These activities (are) often referred to as supportive or administrative".

Price (1972:19) defined the administrative component as:

> "the full time career members of a social system who primarily perform the activities that indirectly contribute towards its primary output".

Champion and Betterton (1974) suggested that indirect activities in which the 'administrative component' are involved, such activities are; decision-making, coordination, and control.

Terrien and Mills (1955), stated that:

> "the relationship between the size of the administrative component and the total size of its containing organization is such that the larger the size of the containing organization, the greater will be the proportion given over to its administrative component"

Rushing (1967) developed a measure of the administrative component in terms of six occupational titles, these are; (i) managers, officials, and proprietors; (ii) professional personnel; (iii) clerical personnel; (iv) craftsman; (v) operatives; and (vi) labors. He named the first three categories as 'administrative personnel'; and the last three categories as 'production personnel".

3.2.4 Employee's Attitudes and Behaviour

In describing sources of attitudes, Reitz (1977:259) stated that:

> "attitudes are learned, not inherited. The person acquires attitudes in the course of his experience, and he maintains them when they are reinforced".

He added three sources of attitudes; these are, (i) direct experience with object; (ii) association (between one object to another); and (iii) learning from others.

In his description, Reitz excludes the role of inheritance in regard to the attitudes. The role of inheritance, we believe, cannot totally be left aside.

He (1977-258) further added three components to the attitudes, these are; (i) affective, (ii) cognitive, and (iii) behavioural components. He described those three components as, that, the affective component

> "includes a person's emotional feelings about an object, his like or dislike of it"

The cognitive component is:

> "made up of the beliefs and information a person has about the object. Regardless of whether his information or beliefs are accurate or inaccurate these cognitions are part of his attitude"

And finally he described the third component, the behavioural component, as:

> "is consisting of aperson's tendencies to behave toward the object in certain ways".

He (1977:260-61) stated four functions to the attitudes, these are; (i) Knowledge, (ii) Instrumental, (iii) Value expressive, and (iv) Ego-Defensive functions.

Drake and Smith (1973:17-18) defined behaviour as:

> "The behaviour of an individual is the result of the demands placed upon him by his environment, and his internal 'state'. This state derives from the interplay between all his previous experience and his genetic inheritance".

They added six aspects for identify, these are; (i) personality, (ii) intelligence, (iii) aptitude (which is concerned with the way in which a person deals with his environment in a particular or exceptional way; for instance with special skill, ability), (iv) attitudes, (v) experience and memory, and finally (vi) knowledge.

3.2.5 Organizational Culture

Porter et.al. (1975) described the organizational culture as:

> "Is a set of customs and typical patterns of ways of doing thing. The force, pervasiveness and natural of such model beliefs and values vary considerably from organization to organization. Yet it is assumed that an organization that has any history at all has developed some sort of culture and that this will have a vital impact on the degree of success of any efforts to alter or improve the organization".

Eldridge and Crombia (1974:89) defined the culture element as:

> "The unique configuration of norms, values,

> beliefs and ways of behaving that characterize the manner in which groups and individuals combine to get things done".

Bower (1969:20), on the other hand, stated five variables for the organizational culture, these are; (i) Communication, (e.g. how receptive are those about you to your ideas and suggestion); (ii) Motivation,(e.g. how much do employees look forward to coming to work each day?); (iii) Decision-Making, (e.g. to what extent are the persons who make decisions aware of problems at lower levels in the company?); (iv) Control, .(e.g.how much say or influence do the various levels of the hierarchy have on what goes on in each department); and (v) co-ordination (e.g.to what extant do persons in different departments plan together and co-ordinate their efforts?). He further added that, those five climate variables were correlated with four leadership variables; these are: (i) managerial support (i.e. the degree to which the manager "increases his subordinate's" feelings of being worth while and important people); (ii) goal emphasis (i.e. the degree to which the manager 'stimulates enthusiasm for getting the work done); (iii) work facilitation (i.e.the degree to which the manager helps his subordinates to get the work done by removing obstacles and roadblocks); (iv) interaction facilitation (i.e. the degree to which the manager builds the subordinate group into a work team).

Bowers (1969:20) in his study to examine the relationship of organizational climate to managerial behaviour in twenty four organizations used the above variables and found that:

> "Organizational climate appears to account for about one-third of the variance in managerial leadership regardless of the kind of organization".

Litwin and Stringer (1968:67-8) measured organizational climate, using a six-scale instrument, as follows: (i) Structure - the feeling the workers have about the constrains in their work situation; how many rules, regulations and procedures there are; (ii) Responsibility - the feeling of 'being your boss', not having to double-check all your decisions; (iii) Risk - the sense of riskiness and challenge in the job and the work situation; (iv) Reward - the feeling of being rewarded for a job well done, the emphasis on reward versus criticism and punishment; (v) Warmth and support - the feeling of general good fellowship and helpfulness that prevails in the organization; (vi) Conflict - the feeling that management is not afraid of different options or conflict.

3.3 Summary

The purpose of this chapter has been to review the relevant literature concerning organizational variables and to highlight the selected organizational variables which will be used in this study. For this purpose, the study has included three types of variables reviewed by Champion (1975), these are, A. Organizational variables, B. Interpersonal variables, and, C. Individual variables. Our review of literature indicated that there are four subdivisions to the organizational variables, these are; 1. Organizational structure, 2. Organizational control, 3. Organizational behaviour, and, 4. Organizational change. Three variables pertaining to structure, they are; 1. Size, 2. Complexity or differentiation, and, 3. Formalization. Four variables are associated to control dimension of an organization, these are; 1. Size of the administrative component, 2. Bureaucratization and debureaucratization, 3. Centralization and decentralization, and, 4. Levels of authority (including span of control). Three variables are associated with the organizational behaviour, these are; 1. Organizational climate, 2. Organizational effectiveness, and, 3. Organizational goals. Finally, six variables are associated with organizational change, these are; 1. Labour turnover, 2. Organizational conflict, 3. Organizational flexibility, 4. Organizational growth, 5. Administrative success, and, 6. technology. In utilizing the relevant review of literature, this study selects certain variables in the general categories, i.e. organizational, interpersonal, and, individual variables. Following are the variables which have been selected for the purpose of this study. Among the organizational variables, two structural variables, they are; 1. Size of organization, and, 2. Structural differentiation. Two control variables, these variables are; 1. Size of the administrative component, and, 2. Levels of authority (including span of control). Organizational culture, as behavioural variable. The uniformity or similarity of values as interpersonal variable. Attitudes and behaviour of members as individual variable.

As far as the size of organization is concerned, the number of employees has been used as an indicator of the size in most of previous studies. Our review of the literature indicates that there are four aspects of size, these aspects are; 1. The physical capacity of an organization, 2. The personnel available to an organization, 3. Organizational inputs or outputs, and, 4. Discretionary resources available to an organization.

For the size of the administrative component, our review of the literature indicated that there are six measures to the administrative component, these are; 1. Managers, officials, and, personnel, 2. Professional personnel, 3. Clerical personnel, 4. Craftsman, 5. Operatives, and 6. Labours.

Three sources of attitudes have been highlighted, these are; 1. Direct experience with object, 2. Association (between one object with another), and, 3. Learning from others. In addition, our scanning the literature indicated three components to attitudes, these are; 1. Affective, 2. Cognitive, and, 3. Behavioural.

For the behaviour elements, there are six aspects of identify, these aspects are; 1. Personality, 2. Intelligence, 3. Aptitude, 4. Attitudes, 5. Experience, and, 6. Knowledge.

Finally, for the organizational culture our review of the relevant literature indicated that there are five variables for the organizational culture, these are; 1. Communication, 2. Motivation, 3. Decision-Making, 4. Control, and, 5. Coordination.

Chapter Four

Relationships of Size of Organization and the Selected Organizational Characteristics: Review of Literature

4.1 Introduction

This chapter is concerned, solely, with the review of literature on the relationship between the size of organization and the selected organizational characteristics; these include, structural differentiation, the administrative component, attitudes and behaviour, and the organizational culture. Starting with studies which examined the structural differentiation, we will emphasize the studies conducted by Greiner (1972), Kimberly (1976), Blau (1973), Blau and Schoehnerr (1971), Meyer, Hinings and Foster (1973), Paulson (1980), Beard (1978), Ammandi et al (1982), Hall et al (1967), and Al-Eshaiker (1983).

For the administrative component, we will concentrate on the studies carried by Goldman (1973), Ford (1980), Anderson and Warkov(1961), Klatzky (1970), Hinings and Bryman (1974), Haas et al, (1963), and Indik (1964).

In scanning the relevant literature regarding the association between size and employees attitudes and behaviour, we will go through the studies carried by Meltzer and Salter (1962), and Thomas (1959).

In regard to the association between size, structure, and the organizational culture, we will concentrate on the review of the literature carried by Grave (1986). But before starting with these issues, we have to concentrate on the consequences of growth in an organization, which is discussed below.

4.2 ORGANIZATIONAL GROWTH

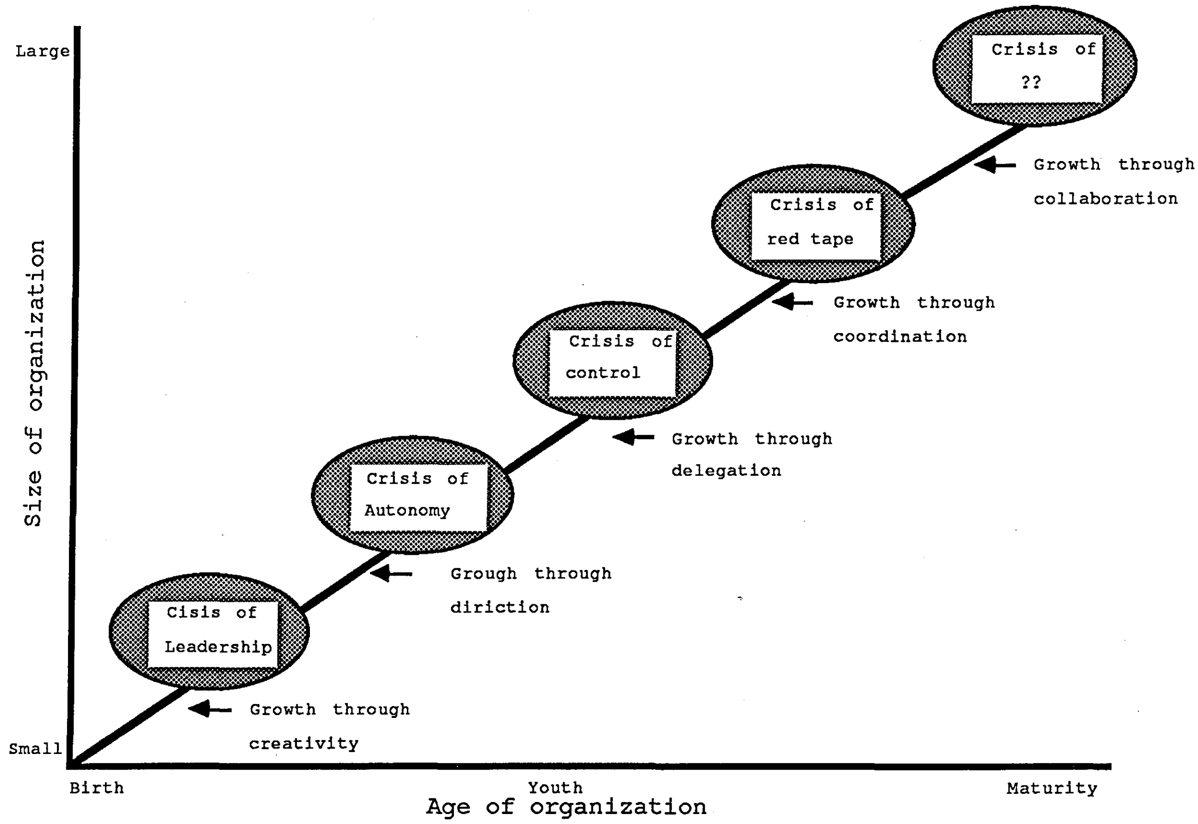
Growth is a goal for most organizations which has several motives, the most important motives are, self-realization, executive mobility, reduction of cost, revenue and profit increase, and survival.

Greiner proposed (1972;40) a growth model in which he observed that organizations often tend to be having problems when their specific structure is not appropriate to the organization's stage of growth and development. He identified the dominant issues and crisis that face the growing organizations. Following is the summary of the series of crisis of grouth which is shown in Figure 4.1.

1.Phase one: Creativity

The organization is born, and the emphasis is on creating a product and surviving in the market place. The founders are entrepreneurs, and they devote full energies to the technical activities of production and marketing. The organization is informal and non bureaucratic and the hours of work are long. Control is based on the owner's personal supervision.

Figure 4.1: Series of Crisis of Growth



Source: Greiner, L. E., "Evalution and Revolution as Organizations Grow", Harvard Business Review, Vol.50, 1972, p40.

Crisis: Leadership

As the organization starts to grow, the larger number of employees create problems. As the founders are unskilled, the organization enters a crisis, therefore, a strong leader is needed who can introduce management techniques.

2. Phase two: Direction

If the leadership crisis is resolved, the organization starts to develop clear goals and direction. Departments as well as the hierarchy of authority will be created. Many of the management activities will be introduced, such as, division of labour, accounting, purchasing. The organization tends to be more bureaucratic.

Crisis: Autonomy

When the organization introduces the management techniques, lower level employees find them self restricted by the strong leadership, and increasing bureaucracy. The autonomy crisis starts when top management, who were successful by strong leadership, do not want to give up responsibility.

3. Phase three: Delegation

Greater responsibility is given to middle managers who may be in charge of plants or market territories. Top management becomes concerned with top management issues such as strategy and planning. New products and new employees specialists may be added.

Crisis: Control

As middle and lower level managers become more autonomous, top management often discovers that the organization is moving in several directions at once. Top management needs to find out that all parts of the organization are in the same direction. In order to overcome the crisis, the organization needs to introduce new techniques to coordinate the increase in the organizational units and activities.

4. **Phase Four:** Coordination

To overcome the control crisis, a sophisticated techniques of coordination should be introduced. More specialists may be hired to review company programs. Incentive systems based on profits may be introduced. The new coordination system, when effective, enable the organization to continuous growing.

Crisis: Red-Tape

At this stage, the organization seems over- bureaucratized, and the organization seems too large and complies to be managed through formal programs.

5. **Phase Five:** Collaboration

To solve the red-tape crisis, the organization introduces a new sense of collaboration and cooperation. The managers develop skills to resolve interpersonal differences. Bureaucracy may have reached its limits. Social control and self-discipline reduce the need for additional formal controls. Managers learn to work within the bureaucracy without adding to it. Generations of employees may pass by the time the organization reaches its final stage of development. Over that period of time, the stages of development reflect patterns similar to those observed in the earlier discussion of size and bureaucracy. As the organization grows, it tend to move toward formalization and decentralization.

Greiner (1972:40) stated that organizations tend to grow through five drives and each one of them embodies its own crisis as it shown in his postulates. He further argued that:

> "In addition to increased size, however, problems of coordination and communication magnify, new functions emerge, levels in the management hierarchy multiply, and jobs become more interrelated".

Greiner (1972:40) named five key factors of development; these are: (i) Age of the organization, (ii) Size of the organization, (iii) Stages of evaluation, (iv) Stages of revolution, and (v) Growth rate of industry.

4.3 Size and Organizational Structure

The relationship between organizational size and organizational structure has been a persistent subject in the literature. Following is a brief discussion on some of the studies carried out to examine the relationship between size of organization and organizational structure. In addition, the problems encountered by researchers in regard to the types of organizations selected will be highlighted.

Kimberly (1976:576) reflected in his review of literature on problems encountered by the researchers concerning types of organizations selected and sampling. He distinguished between two kinds of approaches to samples used by researchers, these are; 1. Intratypical sampling strategy (which uses samples of only one type of organizations), this approach typified by the work of Blau and Schoenherr (1971). 2. Intertypical sampling strategy (which uses samples from different types of organizations), this approach is illustrated by the work of Hall, Haas, and Johnson (1967).

In concentrating on the intratypical sampling, Kimberly (1976:576) stated that:

> "Its use has been justified on the grounds that a theory of organizations is built on the basis of empirical analysis of one type and is subsequently tested and validated through replication in other types".

He noted some of the drawbacks of this type of sampling; these are: (i) Excludes consideration of the possible significance of 'type' as a variable; (ii) It ignores the criterion to be used in distinguishing among organizational types; (iii) It assumes that size should be measured in the same way across organizational types. On the other hand, the intertypical sampling approach, Kimberly (1976:577) argued that:

> "although used much less frequently by organizational researchers, the approach is justified on the grounds that a general theory of organizations ought to enable one to derive hypotheses which can be tested- and, presumably, supported-on a heterogeneous sample of organizations".

He noted that the difficulty in standardizing the measures across the different organizations is a drawback for this approach.

The empirical studies which have adapted an intratypical sampling approach have been carried out widely by researchers, such as by, Blau (1970), Blau and Schoenherr (1971), Meyer (1972), Hinings and Foster (1973), Paulson (1980), Amandi (1982), and, Al-Eshaiker (1983).

Blau (1970:204) in his study suggested that:

> "Increasing size generates structural differentiation in organizations along various dimensions at decelerating rate".

In his study Blau (1970:206) derived some propositions; these were: (i) as the size of organizations increases, its marginal influence on differentiation decreases, (ii) the larger an organization is, the larger is the average size of its structural components of all kinds, (iii) the proportionate size of the average structural component, as distinguished from its absolute size, decrease with increase in organizational size.

Blau and Schenherr (1971) examined a sample of 53 U.S.employment security agencies whose size were ranged from 50-1195. They found that:

> "the larger the agency is, the greater the number of local offices under its jurisdiction, the number of official job titles indicative of the division of labour, the number of

hierarchical levels in the authority structure, the number of major divisions under top management, and the number of sections per division".

Another study conducted by Meyer (1972) took up a longitudinal study of 124 city, country, and state departments of finance. Mayer (1972:434) concluded his findings that:

"the effects of size on other organizational parameters (the number of sub-units, levels of hierarchy, and supervision) are ubiquitous".

And he (1972:437) emphasized that:

"Size is a cause of other parameters of organizational structure, where as other parameters neither cause size nor are related to each other".

Hinings and Foster (1973) examined the relationship between size and structure in churches. They (1973:100) concentrated on three structural aspects; these were: (i) structuring of activities (specialization, standardization, and formalization); (ii) concentration of authority (centralization), and (iii) line control of workflow (span of control). They (1973:103) concluded that:

"Size is expected to have a direct effect on structuring of activities. As the membership increases, churches face the management problems of control and coordination, keeping track of members, and so on. Church strategy for this is

> liable to be through the employment of specialists and the introduction of routines"

Paulson, S. K. (1980), studied 77 small business organizations located in a small, rural, mid-atlantic university community to examine the relative importance of size and technology as determinants of organizational structure. He concluded that, the greater the level of size, the greater the level of horizontal differentiation, and the greater the level of task scope, the greater the level of horizontal differentiation, and finally the greater the level of size, the greater the level of complexity.

Another study carried out by Amandi, B. R. and Mills, E. W. (1982) examined the relationship between size, structure, and efficiency in 128 saving and loan associations in New York. They concluded, that size promotes structural differentiation and the link between vertical differentiation with horizontal complexity.

Al-Eshaiker, A. H. (1983), examined the relationship between size and structure in eight Iraqi textile industries, his findings showed that there is a positive relationship between size of an organization and each of the following variables, a. formalization, b. standardization, c. specialization, d. complexity, and e. decentralization.

Focussing on the empirical studies which have adapted an inter-typical sampling approach, studies carried out by Hall et. al. (1967), and Pugh et.al. (1969). Beards D. (1978), Hall et.al. (1967:904) examined the relationship between size of organizations and complexity and formalization, this study covered 75 organizations with different types (business, Services) and the size were ranged between 9 and 9000 employees. Their findings indicated a negative relationship between size and aspects of complexity and formalization, they (1967:911) stated that:

> "A large organization does not necessarily have to rely upon impersonal, formalized control mechanisms. At the same time, the fact that an organization is small can not be taken as evidence that a gemeinschafft sort of social system is operating".

Other study carried out by Pugh et. al. (1969:98) covered 52 different work organizations with different types (business and services types), their findings indicated a positive relationship between size and the organizational variables. They concluded that:

> "Larger organizations tend to have more specialization, more standardization, and more formalization than smaller organizations".

Beard, D. (1978), examined the effect of organizational size and complexity on managerial role structure. The data were collected from sample of managers from whom data on managerial role structure were obtained including fourty managers in mechanical measuring devices, twenty seven managers in meat packing plants, and twenty managers in general sawmills and planning mills. The results of this study indicates that the factors of the structuring of activities are positively related to organization size in a linear manner.

4.4 Size and the Administrative Component

Kahn et. al. (1964:75) stated that:

> "With increased size, the structure of the organization becomes more differentiated and specialized, more levels of supervision are introduced to maintain coordination and control and more people become involved in organizational planning".

According to Blau and Schoenherr (1971:213):

> "Structural differentiation in organizations - generated by increasing size-enlarges the administrative component, because the intensified problems of coordination and communication in differentiated structures demand administrative attention".

Blau and Schoenherr's (1971) findings suggested three propositions regarding the size of the administrative component, these are:

> (i) "The large size indirectly raises the ratio of administrative personnel through the structural differentiation it generates".
>
> (ii) "The direct effects of large organizational size lowering the administrative ratio exceed its indirect effects raising it owing to the structural differentiation generates".
>
> (iii) "The differentiation of large organizations into sub-units stems the decline in the economy of scale in management with

> increasing size, that is, the decline in the decrease in the proportion of managerial personnel with increasing size".

Scanning the relevant literature regarding empirical studies of the association between the size of organizations and the size of their administrative components, it could be argued that this type of association is widely studied by students of organizations.

We will concentrate on the studies carried out by Goldman (1973), Anderson and Warkov (1961), Klatzky (1970), Hinings and Bryman (1974), Haas et.al. (1963), and Indik (1964).

Starting with study by Goldman (1973), his study covered 124 retail department chain stores, they were ranged from 33-1900 employees in size. His findings indicated a negative association between the relative size of the administrative component and the size of organization.

Ford, J. D. (1980), examined the relationship between size and the administrative component in 24 school districts. The findings of his study indicates that the increases in size are associated with increases in administrative personnel but that the percentage change in administrative personnel is less than the percentage change in size.

Anderson and Warkov's (1961) data were secured for administration hospitals in the United States, it covered 49 hospitals, they defined the administrative component in terms of the percent of all employees classified in the category' general hospital administration', i.e., the manager's office, the registrar's office, and the fiscal, personnel, and supply units. Their findings indicated a negative association between the size of hospitals and the relative size of their administrative component, and their (1961:23) proposition is that the relative size of the administrative component decreases as size increases.

On the other hand Klatzky's (1970) study covered 53 state and territorial employment agencies of the U.S., their size ranged from 50 to 9078 employees, his (1970:435) findings indicated that:

> "Increases in size reduces the relative size of the staff".

Hinings and Bryman's (1974) study of churches covered a sample of 68 churches, their (1974:465) findings suggested that there is a positive association between the size of churches and the relative size of their administrative component.

On the other hand, Haas et. al. (1963) study of 30 organizations, the size was ranged from 10- 4406 employees, and the age range was between 9-110 years, they (1963:14) concluded that:

> "In the organizations studied, the percentage of personnel engaged in supportive activities actually decreased as organizational size increased".

Indik's (1964) study covered five sets of organizations, which include 2 sets of business organizations (68 individual organization) and 3 sets of mutual-benefit organizations (32 individual organizations). He defined the supervision ratio as:

> "The ratio of the number of supervisors to the total number of members".

Indik (1964:306) concluded that:

> "As size of the local organizational unit increases, the supervision ratio declines".

4.5 Size and Employee's Attitudes and Behaviour

Scanning the relevant literature regarding the empirical studies of the association between size of organizations and attitudes of their members, we will concentrate on the studies carried out by Meltzer and Salter (1962), Thomas (1959).

Examining the association between size and job satisfaction, Meltzer and Salter (1962) studied a sample of 709 physiological scientists in U.S., they (1962:335) concluded that:

> "Size of the organization is curvilinearly related to satisfaction, with the highest percentage of the very satisfied occurring in the medium sized research organizations".

Thomas (1959) studied the relationship between size of organizations and the quality performance, his study covered 109 welfare workers in three size-range (small, medium, and large) of organizational sub-units of a state welfare department, he (1959:30) concluded that:

> "In smaller units there was more role consensus,

> greater breadth of role conceptions, higher ethical commitment and better quality of work performance".

Regarding the empirical studies of the association between size of organizations and behavioural patterns, we will concentrate on the studies by Ingham (1970), and Porter and Lawler (1965). Ingham (1970) studied the association between size of organizations and absenteeism and the rate of labour turnover, his sample included 8 engineering industries, with size range of 9-5000 employees, his (1970:22-25) findings suggested that:

> "There is a strong statistical relationship between the absence rate and organization size in the sample in question here".

And:

> "No significant relationship has been discovered between organizational size and various measures of labour turnover".

Porter and Lawler's (1965) review suggested a positive association between size and absenteeism had been found by Kerr et. al. (1951), Acton Society Trust (1953), Hewitt and Parfitt (1953), Metzner and Mann (1953), Indik and Seashore (1961) and others. Their (1965) review also indicated that a strong positive association between organizational size and labour turnover had been found by Kerr et.al. (1951), Mandell (1956), and Indik and Seashre (1961) and others.

According to Porter and Lawler's (1965) review, no distinct patteren association between size and productivity has been maintained, and negative association reported by Marriott (1949), Indik and Seashore (1961) and the positive association proposed by Argyle et.al. (1958).

4.6 Size and Organizational Culture

Scanning the relevant literature regarding the association between organizational size, structure and the organizational culture, we will concentrate on the Graves's (1886) review of literature.

Graves (1986:48) indicated that:

> "This review of the literature indicates that previous thinkers and researchers have adopted one of three viewpoints concerning culture: (i) The culture is a product of the context-the market in which the organization operates, the legal constraints, and so on. (Paye and Pugh 1976); (ii) the culture is a product of the structures and functions to be found within the organization. A centralized organization will have a different culture from a decentralized one, for example (Harrison 1972); (iii) the culture is a product of people's attitudes to their work: it is the product of the individual psychological contracts with the organization.(James and Jones 1974)."

He noted two different approaches for the factors affecting cultures, these are, 1. the structuralist view, which includes two sub-sets of theories which are ,first, the "holistic structuralists" who look at the organization as a whole such as the work of Weber, and Pugh et al. (1969); and second, "psycho-social structuralists" which emphasizes the structural elements of the group, such as Whyte (1959) and Homans (1950). 2. the interactionist view, which includes two sub-sets, first, those for whom the social system is crucial, such as Emery and Trist (1950) and Katz and Kahn (1966), and second, those who are more concerned with rationality, such as March and Simon (1958), Cyert and March (1963) and Dill (1978).

Graves (1986:9) argued on the organizational culture as:

> " ..... if it is true that different cultures create different attitudes and bevaviour patterens, and if it is true as Haire et al, have said (1966) that the cultural element is a substantial but not over whelming conditioner of behaviour, then significant differences between the attitudes and behaviour of people in different organizations indicate the presence of something we may call organizational culture."

Generally speaking, leaders of organizations play vital roles in determining the organizational culture, and some times new leaders try to create new atmospheres and to adapt new rules and environment as an attempt to change or to improve the organizational culture.

Graves (1986:122) argued that:

> "the style of the leader can never be ignored by

> subordinates: some will exaggerate it, other may tend to rebel against it, but the style of the leader, both real and imagined, is as much a part of the culture as the technology or the rule-book."

He (1986:120-125) stated five roles for the leaders on the organizational culture, these are: 1. The leaders as culture-giver, 2. The leader as a epitome of behaviour, 3. The leader as the giver of meaning, 4. The leader as moderator of the culture, and 5. The leader as custodian of the culture. He (11-25), described organizational culture into five elements, these are, 1. As means of stabilizing behaviour, 2. As an incentive to commitment by falsification of the equity balance, 3. As a defence against anxiety, 4. As a system of casual relationships, and, 5. As operant conditioner.

Many studies have examined the variables of the organizational culture, among them was Bowers (1969-20) has studied the relationship of organizational culture to management behaviour in twenty-four organizations, he emphasized five variables of organizational culture, these are, 1. Communication, 2. Motivation, 3. Decision Making, 4. Control, and 5. Coordination. His findings indicates that between 30-50 percent of the variance in managerial behaviour related to the impact of the five variables of the organizational culture, and he added that the communication variable is related more strongly than other variables.

It can be noticed that the concept of organizational culture illustrates a common dilemma in efforts to describe and understand human behaviour. The basic problem is how to define and operationalize the concept in order to measure it reliably and validly. However, there are many critics of the methodological used. Johannesson (1073:37) has argued that because of the nature of the methodology and the underlying quest for a link between culture and job satisfaction. He stated that:"perceptual measurement of climate runs the distinct risk of tunning out to be little more than an alternative form of measurement of job satisfaction".

Taginri (1968:13), on the other hand, stated that behavioural science has long had problems with "environmental" concepts such as organizational culture, and has summarized the most important of these problems as follows:

1. Distinguishing between the objective and subjective environment.
2. Distinguishing between the person and the situation.
3. Determining what aspects of the environment need to be specific.
4. Identifying the structures and dynamics of the environment.

These problems remain pertinent to the study of organizational culture today and to a large extent are still unsolved. One way of avoiding these problems might be to study the personal characteristics of the organizational members using an objective measure.

There is a further possibility of testing the strength of the ideology if the needs and values can be measured. Such emphasis upon the interplay between personality and environment was also mentioned by Forehand and Van Haller Gilmer (1964:378) who added some of the reservations, which are as follows:

1. It is necessary to compare comparable organizations.

2. It is not certain that organizations are homogeneous units.
3. Climate is a dynamic not static concept.
4. Climate is not a dimension.

An interesting attempt to describe culture was made by Marshall (1982). She compared and contrasted two process production companies using four elements: the company's stock of managers; the job models managers; the things that influence job performance and the managers perceptions of freedom. Marshall (1982:178) listed six major influences on organizational culture, which are as follows:

1. Nature of the product and production technology.
2. Organization structure, especially centralization or decentralization.
3. Company's economic/market position.
4. Company's recruitment policy.
5. Officially promoted priorities.
6. Organization's socialization mechanisms.

Hedlund (1978:13), in an examination of two highly similar companies with different cultures operating successfully in the same market, concluded that, organizations can choose what culture to adopt. He attributed the differences in culture to:

1. The president of the company.
2. The top managers who personify the culture.
3. Style imprinting upon the individuals.
4. The self-reinforcing characteristics of the organization.
5. The organizational structure and process.
6. Its historical development.

Litwin and Stringer (1968:67-8), reported an attempt to measure organizational climate using six scale instrument:

1. Structure- the feeling the workers have about the constrains in their work situation ; how many rules, regulations and procedures there are.

2. Responsibility- the feeling of "being your own boss", not having to double check all your decisions.

3. Risk-the sense of riskiness and challenge in the job and in the work situation.

4. Reward-the feeling of being rewarded for a job well done; the emphasis on reward versus criticism and punishment.

5. Warmth and support-the feeling of general good fellowship and helpfulness that prevails in the organization.

6. Conflict-the feeling that management is not afraid of different opinions or conflict; the emphasis on setting differences here and now.

4.7 Summary

This chapter aimed to investigate the studies carried out by researchers in connection with the relationship between size of organization and the organizational variables. In fact the relationship between the organizational size and the organizational structure has been a persistent subject in the literature and carried out widely by researchers.

This chapter started with the consequences of growth in an organization proposed by Greiner (1972), and distinguished between two kinds of approaches to samples used by researchers, there are, 1. Intratypical sampling strategy (which uses samples only one type of organizations), and, 2. Intertypical sampling strategy (which uses samples from different types of organizations). Examples of the empirical studies which adapted an intratypical sampling approach are, Blau (1970), Blau and Schoenherr (1971), Meyer (1972), Hinnings and Foster (1973), Paulson (1980), Amandi (1982), and, Al-Eshaiker (1983). And the examples of the empirical studies which adapted an intertypical sampling approach are, Hall et.al. (1967), Pugh et.al.(1969), Hall et.al. (1967), and Beard (1978).

In examining the findings of these studies in connection with the relationship between size and structure, size has a direct effect on structuring activities found in most of the empirical studies. And some studies have considered size of an organization as one of the most important factors which influence the structure of the organization.

Regarding the relationship between size and the administrative component, the findings of the studies reviewed in this chapter suggest that there is a significant relationship between them. As for the relationship between size and attitudes and behaviour of the employees, the findings of studies indicate that size of organization is related to satisfaction and a statistical relationship between the absence rate and organizational size exists.

Finally, many studies have examined the variables of the organizational culture, and they have emphasized five variables for the organizational culture, these are; 1. communication, 2. motivation, 3. decision-making, 4. control, and, 5. coordination. These findings indicated that there are relationships between managerial behaviour and the five variables of the organizational culture.

In the following chapter, country background is discussed as a prerequisite to the analysis.

CHAPTER FIVE

PAKISTAN BUREAUCRACY

5.1 Introduction

This chapter aims to give the reader an idea of country background, and explaining the important characteristics of Pakistan bureaucracy. Three main issues will include, 1. The introductory survey which includes, location, Population and Area, recent history climate, language, and religion. 2. The Economy, and, 3. characteristics of the Pakistan Bureaucracy. Following is a brief discussion on each issue.

5.2 Introductory Survey

In the following, we will emphasize some characteristics which include, location, population and area, recent history, climate, language, and religion. As far as the location is concerned, Pakistan lies in southern Asia, boarded by India to the east and by Afghanistan and Iran to the west. It has a short frontier with China in the far north-east. The population of Pakistan was 99,199,000 in 1985, on the basis of the last official census held in 1981 when the population was 83,782,000. The population is expected to reach 139 million by 2000 and 195.7 million by 2020, the total land area is 803,943 sq km (310,403 sq mi).(Kurian,G.T.1987:1505-1523).

In recent history Pakistan was created in August 1947 by the partition of the United Kingdom's former India Empire into the independent states of India and Pakistan. Pakistan has a dry climate and generally hot except in the mountains which have very cold winters. The national language is Urdu. Punjabi, Sindhi and Pushtu are also widely spoken, and English is extensively used. The state religion is Islam, embracing about 97 % of the total population, the reminder being mainly Hindus or Christians.

5.3 The Economy

Pakistan is one of the 49 low-income countries of the world and it is also one of the 45 countries considered by the U.N. as most seriously affected by recent adverse economic conditions. (Kurian, G.H., 1987:1914).

Agricultural dominates the economy of Pakistan, is the largest commodity-producing sector, the principal source of income for a majority of the rural population, the most important source of exportable surpluses, the principal supplier of raw materials for industry, and the premier market for the outputs of non-agricultural sectors.

For the industry, the manufacturing output expanded at an annual rate of 7.8 % between 1949 and 1984. Industrial expansion began in the 1960s, slowed down in the 1970s and revived in the 1980s. In 1986/87 manufacturing grew by 7.4 %. The share of manufacturing in GDP has shown a generally rising trend, reaching a peak of 19.7 % in 1984/85 but falling to 17.3 % in 1986/87. The growth rate of the manufacturing sector in Pakistan compares favorably with that of most other developing countries. Observers of the Pakistan economy increasingly refer to the small-scale industries of Pakistan in highly favorable terms, and see in them the potential for playing a dynamic role, specially in the generation of employment and in earning foreign exchange.

Gilani I.,(1989), argued that Pakistan does not meet all of its foreign exchange needs from its own resources. To fill this gap, the country has had to borrow from international public and private sources. The total of medium-and short-term loans and grants to Pakistan up to December 1985 was US $ 26,200m.

The trade position of Pakistan is not very healthy. The country has continuously had a deficit on its balance of trade since 1972/73. The trade gap has been increasing because, although exports have been making visible gains; imports have risen even faster. Exports are dominated by a few major commodities. Nine traditional export items, including rice, cotton, carpets and leather products, account for two-thirds of total export earnings.

Pakistan's principal trading partner is Japan, which provided 14.9 % of imports and took 9.6 % of exports in 1985/86. The U.S.A., Saudi Arabia, United Kingdom and Federal Republic of Germany are also important trading partners. (Gilani I. 1989:838-842).

Central planning was introduced in the mid-1950s under the auspices of the planning commission, which determined both the direction and pace of economic growth. In 1985, according to estimates by the World Bank, Pakistan's gross national product (GNP), measured at average 1983-1985 prices, was U.S. $ 36,230m equivalent to $ 380 per head. It was estimated that GNP per head increased, in real terms, at an average rate of 2.6 % per year between 1965 and 1985. Agriculture is the principal sector of the economy, employing about 51 % of the working population in 1985 and provided 23.7 % of the country's gross domestic product (GDP) in the year ending 30 June 1987. (The Europa year book, 1988, p. 2074).

Pakistan has a wide range of minerals, but mining is not greatly developed. Nationalization of major industries began in 1972, but the Government reversed this policy and introduced a number of measures to restore levels of investment (both foreign and domestic) in the private sector. (The Europa year book, 1988, pp. 2073-2075).

In 1978 the government announced plans to Islamize the economy. Such an economic order involves the abolition of interest, limited liability, and incorporation, and the introduction of religious taxes, as provided for in the Koran. (Kurian, G.T. 1987: 1514-1516).

The Balance of payments for the years 1984-1986 suggests that the deficit in the balance of trade decreased in 1985 compared to that of 1984, then started to increase in 1986 as shown in table 5.1 below. This is mainly due to the increase in exports at a rate higher than of the increase in imports. Moreover, the balance of payment has shown a deficit as a result of increase in the imports of both goods and services at a rate higher than their exports. Current balance also still has a deficit. Capital information is increasing as a result of the investment of both long-term and direct capital investment.

Table 5.1: The Balance of Payments For the Years (US Million)

	1986	1987	1988
Merchandise exports f.o.b.	2,480	2,648	3,141
Merchandise imports f.o.b.	-6,234	-5,878	5,960
Trade balance	-3,754	-3,230	2,819
Exports of services	982	956	958
Imports of services	-1,750	-1,870	1,949
Balance on goods and services	-4,522	-4,144	3,810
Private unrequited transfers (net)	2,942	2,710	2,635
Government unrequited transfers (net)	384	354	476
Current balance	-1,196	-1,080	-700
Direct capital investment (net)	60	142	110
Other long-term capital (net)	362	453	537
Short-term capital (net)	-110	4	-137
Net errors and omissions	-95	32	-1
Total (net monetary movements)	-978	-448	-190
Monetization of gold	-	12	11
Valuation changes (net)	62	-105	-48
Exceptional financing (net)	160	296	353
Charges in reserves	-756	-246	125

Source : IMF, International Financial Statistics, published in The Europa year Book 1988, p.2080.

5.4 Characteristics of the Pakistan's Bureaucracy

5.4.1 Cultural Background

The environment of administration in Pakistan is rich with the Muslim heritage of the subcontinent, as it has been altered by the British presence over more than three centuries and by the absorptive powers of Hindusim for more than twelve centuries.

The cultural fabric of Pakistani administration is as complex and in some respects as confusing as that in any developing country. By 'culture' is meant here the way of life shared by members of the society-the attitudes, values, motivations, social institutions, and techniques common to it. Great uniformity through this big country is not the case, and Pakistani culture is made up of many subcultures. It may be argued that the East and West wings are discrete in this respect, and as to language and numerous living habits this is incontrovertible. In Pakistan, there are important cultural differences, in eating, dressing, family life, and so on, among Pathans, Panjabis, Sindies and Baluchis. Western education and Western ideas, urbanization, and industrialization have been the yeast of change through out the subcontinent for many years. Migrations at the time of partition brought people to

Pakistan from all parts of India, with assorted ways of life. The impact of these forces has been concentrated but not confined in the cities. Illiteracy is greatest in the villages today and the cause and effect of this fact can not be separated. Less than a fifth of the total population is literate. Life in the villages every where in Pakistan remains traditional, signs of modernization always are close at hand, among them not only medicine, foods, but also the opening of urban markets for village produce, better transportation, and, most important of all, new ideas. Corruption in administration is a social and cultural phenomenon which possibly arises out of the stresses of modernization, although, it is by no means certain that it is more serious in developing than in more developed countries.

5.4.2 Bureaucracy Characteristics

Kennedy, C. H. (1987:5-12), indicated that the Pakistan Bureaucracy can be defined in terms of four fundamental characteristics, these are; 1. the Secretariat system of bureaucracy authority, 2. Systemic preference for generalists, 3. Cadre system of organization, and 4. Rigid and formal patterns of rank hierarchy . Following is a brief discussion on each of them.

5.4.2.1 The Secretariat System of Bureaucratic Authority.

The Secretariat is the 'policy-making' structure of bureaucracy comprising Divisions in Federal government and departments in the provincial government. The head of the Division in the Federal government and of the department in the provincial administration is the secretary. The post of the Federal secretary is probably the most powerful in the Pakistani bureaucracy and is usually filled by senior-most civil servants. In Pakistan's history, the secretaries have played a very important role in policy-making and in the affairs of the government, maintaining their power and prestige in political governments and martial law administrations alike.

Kennedy, C. H. (1987:5-12), stated the major factors which make the secretaries' position pre-eminent, these factors are; 1. The 'Rules of Business' of the Government of Pakistan give considerable power to the secretary assigning him also the role of an advisor to the Minister in policy-making. 2. The secretary is very often the sole custodian of information and data on which policies are based. 3. The secretaries have inherited a tradition from the British days whereby they have exercised a great deal of power and influence in the government. 3. The secretaries on the whole are experienced, intelligent and competent officers whose advice can not easily be ignored by the Ministers.

Under the terms of the 1973 constitution, the government of Pakistan has a ministerial form of organization. The number of ministers varies with each ministry composed of one or more "divisions". Each division in turn is composed of a central secretariat, attached departments and "subordinate officers" and "autonomous" and/or "semi-autonomous" organizations affiliated with the division. Usually autonomous corporations are subject to less direct control from their parent secretariat than are attached departments. Directors of autonomous corporations are responsible directly to the secretary of the division, while heads of attached departments are usually responsible to secretariat officers subordinate to the secretary. Also, autonomous organizations are usually larger than attached departments.

Kennedy, C.H. (1987: 6-8), noted that the combine strength of attached departments and autonomous organizations dwarf the respective sizes of their central secretariat. The best available evidence indicates that a total of 13,784 public servants worked in the parent organizations of the federal secretariat in 1983, while 137,191 worked in attached departments and subordinate officers, and perhaps as many as 400,000 worked in autonomous or semi-autonomous organizations. Central secretariat employ more officer level employees than do other levels of organizations.

As this structure of organization indicates, the administrative system of Pakistan firmly adheres to the conceptual dichotomy between staff and line officers. Staff officers (secretariat officers) provide the policy direction for programmes, they assess such programme's effectiveness or ineffectiveness, modify the scope of given programmes, are ultimately responsible for staffing and for the training of officers, serve as the Liaison between administrative institutions within the bureaucracy, and act as the conduit through which political control is exercised. Line officers (officers in attached departments/autonomous organizations) on the other hand, execute the programmes which the staff officers introduce.

Line officers typically are placed lower in the rank hierarchy of the service structure than secretariat officers holding comparable posts, and the career pattern of secretariat officers are open to a great deal of diversity and inter-institutional mobility. The combination of these factors make assignment to secretariat postings much more attractive to prospective officers of the bureaucracy of Pakistan.

5.4.2.2 The Systemic Preference for Generalists.

The other characteristic of Pakistani bureaucracy is the 'preference for generalists', which is reflected in two ways: 1. in recruitment and 2. in the pre-eminence enjoyed by the generalist Cadres. At the time of recruitment in bureaucracy, university graduates in natural sciences, social sciences, humanities, engineering, medicine, and other subjects are treated at par and receive no 'preference for relevant'. A university graduate in biology or chemistry, for instance, may be appointed in the Income Tax Department and a graduate in finance may be selected for the Police Department. The second aspect of preference for generalists is that some of the generalist services, particularly the civil service of Pakistan (CSP) and its successor District Management Group (DMG) have occupied a privileged position in the administrative system and their members are frequently the incumbents of the highest posts in bureaucracy.

Both a cause and a consequence of the secretariat system of authority is the long-standing principle of preference for the selection of generalist administrators to fill secretariat posts. Heads of departments, are responsible to secretariat officers who predominately possess generalist backgrounds. Candidates to the CSS examination, the main avenue to secretariat posting must possess at least the prerequisite of a Bachelors degree in Arts or Science-B.A. or B.Sc., and are judged on the basis of an examination which emphasizes a liberal arts background, administrated in English. After the officers starts with his posting in the field, this generalist bias is further reinforced by the organizational environment to which he is subject. First, transfers are frequent and as a consequence the officer usually cannot gain substantive expertise in any given field of administration. Second, there is no personal incentive for officers to work at gaining such expertise. Third, given the organizational relationship between secretariat officers and line officers, there is a little institutional incentive to establish specialization. Heads of departments are responsible for the field operations; secretariat officers are responsible for formulating what such field officers should do.

5.4.2.3 Cadre system of organization.

Another important feature of bureaucracy is the division of civil servants into well-defined groups, services or cadres. The cadre system, which started approximately 200 years ago in the subcontinent, was incorporated by the Government of Pakistan 'with only minor modifications'.

In this system, an officer remains a member of his originally assigned cadre throughout his career and his promotional prospects, job type, and duties are determined to a large extent by association with his cadre. Officers with federal cadre affiliation predominantly fill the top posts in the central secretariat.

In 1983, for instance, 75 percent of secretaries to the federal government possessed federal cadre affiliation. Also of great significance are profound differences in the states and prestige which accrue to membership in particular cadres. Members of this service were subject to higher scale of pay than members of other services. Promotional prospects, training facilities, and housing allowances were also designed to favour CSP officers.

Kennedy (1987) pointed out some of the negative aspects of this system, these include; 1. The cadre system has retarded the process of administrative reform. 2. It has 'contributed to administrative inefficiency' as it is only marginally related to job performance and encourages 'politics' in bureaucracy.

5.4.2.4 Rigid and Formal Patterns of Rank Hierarchy.

A final characteristic of the administrative system of Pakistan is a rigid pattern of rank which corresponds to occupational type.

Table 5.2: Basic Pay Scale, 1983

Basic Pay Grade	Basic Pay Scale Rupees/Month	Comparable Posts
1	440-10-640	Peon
2	460-12-700	Record Secretary
3	480-14-760	Machine Operator
4	500-16-820	Staff Car Driver
5	520-18-880	LowerDivision Clerk
6	540-20-940	Clerk
7	560-23-1020	Upper Division Clerk
8	590-26-1110	Typist
9	620-29-1200	Stenotypist
10	660-32-1300	Senior Stenotypist
11	700-35-1400	Assistant
12	750-40-1550	Assistant-in-charge
13	800-45-1700	Assistant-in-charge
14	850-50-1850	Stenographer
15	900-55-2000	Senior Stenographer
16	1050-80-2250	Superintendent
17	1600-120-3040	Entry Level Officers
18	2100-150-3600	Section Officers
19	3200-160-4480	Deputy Secretary
20	3800-180-5240	Joint Secretary
21	4200-225-6000	Additional Secretary
22	4500-250-6500	Secretary

Source: Kennedy C.H.(1987), adapted from Dawn,19 August 1983.

Members of the bureaucracy were divided into 'covenanted' and 'uncovenanted' public servants, later into those who were 'gasetted' and those 'non-gasetted', and by the twenties into four 'classes'-ranging from officers-level class I to menial level, class IV. In 1973, the ranks were reorganized into 22 national pay grades. Grade I to 4 were designed for workers performing unskilled tasks; Grade 5 to 15 for various levels of clerical personnel; Grade 16 for superintendents; and Grade 17 to 22 for officers. Table 5.2 above, shows the basic pay scale introduced in 1983

5.5 Summary

This chapter gives the reader an idea about Pakistan, its geographical location, area, population, climate, recent history, language, religion, and the bureaucratic system.

Pakistan is about 100m population, the majority are muslims, several languages are spoken, mainly Urdo and English.

The economy of Pakistan is presented and characterized by the domain of agriculture, industry, and a chronic deficit in the balance of payment. Pakistan is considered one of the poorest country in the world with a per capita income of about $ 300 annually.

The Bureaucracy characteristics of Pakistan is derived from the culture and the inheritance of the British colonial system. Four main characteristics of bureaucracy were found, these are; 1. the secretariat system which is the policy making structure of bureaucracy comprising of divisions in federal government and departments in the provincial government. 2. the systematic preference for generalists which is reflected in the recruitment and the pre-eminence enjoyed by the generalist cadre. 3. the cadre system of organization which is dividing the civil servants into well-defined groups, services or cadre. The cadre system is rigid started since 200 years ago. and. 4. the rigid and formal patterns of rank hierarchy , this corresponds to occupational type. The cadre system reflects the rank hierarchy is presented in table.

Bureaucratical system in Pakistan has its effect on their institutions including PIA. PIA historical background and its organizational structure as well as its activities and performance are presented in the following chapter (chapter six).

CHAPTER SIX

P.I.A. ORGANIZATION

6.1 Introduction

This chapter is devoted to give a historical background of Pakistan International Airlines (PIA), its activities, its Organizational Structure, and, its analysis of performance.

Thus, this chapter is classified into four sections, these are; 1. Historical background, 2. Activities of PIA., 3. Organizational Structure, and, 4. Analysis of performance.

The following is a discussion of each of the above mentioned sections.

6.2 Historical Background

Pakistan International Airlines was established in 1954, following is a brief summary of its historical background between 1954-1986, (PIA, May 1987).

1954 - Pakistan International Airlines established.
PIA's first Super-constellation (AP-AFQ) registered on April 24, 1954.
- PIA started its regular services from may 10,

1954.

- Direct service introduced between West and East Pakistan (now Bangladesh).

1955 - Pakistan International Airlines Corporation formed with merger of PIA and Orient Airways.

- PIA entered the world of international aviation with a service from Karachi to London via Cairo and Rome.

1956 - Engineering base takes shape. First Super-Constellation engine overhauled at PIA's own shop. Extensive training programmes launched.

- Orders placed for two lockheed super-H constellations and three-with option of five-Vickers Viscount tubo-prop airlines.

1957 - PIA starts making profit, until about the middle of 1956, it had been running at a loss of about Rs. 10 million annually.

1958-59 - First two Viscounts began operating and traffic increased on all domestic and European routes.

- PIA started modernizing its fleet by replacing the Convairs with turbo-prop Viscount aircraft.

1959-60 - Boeing 707-320 "intercontinental" introduced on the London route.

- Became the first Asian airline to operate a jet (by leasing one from Pan American World Airways).

1960-61 - First three of five Fokker F-27s received and order placed for three Boeing 720B jet aircraft.

1961-62 - Operating revenues increased by 39 % over previous year. 87.7 % of all flights operated on time or within 15 minutes of schedule.

- First Boeing 720B received in January.
- 1,379 students completed 2,28,768 student-hours in PIA's integrated Ground Training School.

1962-63 - PIA made an operating profit of Rs. 6.86 million and a net surplus of Rs. 6.86 million.

- Integration of Boeing 720B fleet completed. Order for three Sikorsky S61N helicopters placed.
- Boeing 720B introduced between the two wings of the country.

1963-64 - Became the first non-communist airline to fly to the People's Republic of China, and to operate a service between Asia and Europe via Moscow.

- Commercial, unsubsidised helicopter service operated throughout East Pakistan (now Bangladesh).

1964-65 - Fourth Boeing 720B aircraft arrived. Two more Fokker F-27 aircraft were received just after the close of the year.

- Record operating surplus of Rs. 49.22 million

1965-66 - A system of Feeder services linking eight new places was introduces in West Pakistan.

- V-815 operation was completely replaced by Trident 1E medium-haul Jet Operation.
- Three Trident 1E and two Fokker F-27 aircraft were received and integrated into the fleet.
- Pierre Cardin uniform for Airhostesses introduced.

1966-67 - An IBM 1401, the first computer in pakistan, was installed in PIA.

- Engine Overhaul Shop was completed and commissioned.
- More aircraft, two Boeing 707-340Cs, one Trident 1E and two F-27s, were added to the fleet.
- PIA Air Academy started functioning.

1967-68 - One more Fokker F-27 and one Boeing 707 received.

- First batch of PIA trainee-pilots competed their training from PIA flying school and received commercial Pilot's license.
- PIA crossed the million passenger mark on its total system on May 31.
- A new Jet Hanger for Boeings and a supporting airframe overhaul shop were completed and commissioned.

1968-69 - Fourth Boeing 707 received.

- Order placed for a Boeing 707 flight simulator.
- Passengers carried on domestic services crossed the million mark.

1969-70 - Agreement signed for maintenance of Air Celon's Trident 1E aircraft at PIA workshops. Engineering Services also extended to Royal Nepal Airlines Corporation for the overhaul of Fokker aircraft.

- Agreement signed for the sale of Tridents to China.

1970-71 - Mutual assistance agreement signed with various airlines.

- Purchase and lease of five Boeing 707 aircraft completed.

- Order for one more F-27 placed.
- Flight Kitchen at Karachi inaugurated.

1971-72 - Trans-Atlantic service resumed.
- Close circuit television system installed at Karachi Airport.
- Agreement signed with LAA for domestic operations in Libya.
- Agreement signed with the Yugoslav airline JAT for lease of three Boeing 707 aircraft.

1972-73 - Terminal facilities at Islamabad and Karachi expected.
- Management agreement signed with Air Malta under which PIA seconded a management team to malta.
- PIA contracted to purchase three long-range wide- body Douglas DC-10 series 30 aircraft.
- Become the first airline to introduce a second rout to China over the Karakoram ranges.

1973-74 - A whole time Chairman of the Board of Directors appointed.
- Two DC-10-30s were added to the fleet.
- Two 720Bs were given to Air Malta on lease.

1974-75 - Three 720Bs Boeing aircraft were added to the fleet.

- Third Dc-10-30 was added to the fleet and a fourth ordered.
- A weekly all-freighter Boeing service to New York was introduced.
- Facility established for testing CF6-50 engines and components of DC-10 aircraft.
- F freighter service introduced.
- A new uniform for PIA Airhostesses was introduced.

1975-76 - DC-10 introduced on domestic routes.
- Two Boeing 747 acquired on lease and successfully introduced on transatlantic route.

1976-77 - Anew corporate identity programme implemented.
- PIA earned a record operating surplus of Rs.152.08 million.
- One DC-10, two B-707 and one 720B aircraft were added to the fleet.
- A pension scheme introduced for employees.

1977-78 - Option to purchase two B747s was exercised.
- Two PIA subsidiaries established and registered in the UAE to promote and manage hotel projects abroad.
- Technical assistance provided to Somalia

Airlines, Air Malta and Yemen Airways.

1978-79 - PIA earned a record operating surplus of Rs.267.77 million.

1979-80 - Introduction of two additional Boeing 747. Four A-300 aircraft also inducted.

- Cut-over of domestic stations to in-house computerized reservations system. REPAK.
- Opening of air cargo center at Karachi airport.
- Establishment of new downtown sales office.

1980-81 - Wide-body hangar and related workshop commissioned.

- International stations cut-over to the in-house computerized reservations system, REPAK.
- New Flight control system opened at Karachi Airport.

1981-82 - Weekly service to Abu Dhabi and Dubai from Peshawar inaugurated.

- PIA was rated as the leading and the most efficient airline for the year 1981 Haj operation.
- Duty free shopping complex inaugurated at Karachi Airport.

1982-83 - PIA earned all-time high operating surplus of Rs.441.0 million.

- Another DC-10, Airbus and 707 were added to the fleet.
- First ever 'C'and 'D' Checks were carried out on Boeing 747 and DC-10 respectively.
- PIA introduced 'Direct Inward Dialing' telephone facility first time in the country.
- Mini-Micro computers installed in PIA Head Office.

1983-84
- Automation of budget. finance, revenue and other important areas introduced.
- Islamabad-New York flight via Istanbul inaugurated.
- Night Coach Services between Lahore and Karachi and Islamabad and Karachi introduced.
- Foundation of PIA Township laid at Karachi Airport for the employees.
- Extension and modernization of the PIA Flight Kitchen undertaken.

1984-85
- PIA set up first-ever planetarium of Pakistan at Karachi.
- PIA introduced feeder service in the country.
- Five Boeing 737-300 aircraft inducted into the PIA fleet.

- PIA's revenue, for the first time, exceeded the Rs. 100,000 million mark.

1985-86
- Introduction of 'Sohni' Executive Class on all PIA B747 aircraft on international flights.
- New uniform for Airhostesses introduced.
- Fourth flight introduced to New York.

6.3 Major Activities Of PIA

P.I.A. Fleet consists of 37 Aircrafts, which include, 8 Boeing 747-200, 8 A30044, 4 Boeing 707, 6 Boeing 737-300, 9 Fokker F-27, and, 2 Twin Otter.

The major activities of PIA include, automation, reservation system, baggage tracing, massage switching, computer supper system, flight kitchen, and training system. Following is a brief discussion of each.

6.3.1 Automation in PIA

PIA has taken the lead in introducing automation technology. The airlines's computerized systems are based on the most advanced concept of distributed processing. This provides adequate processing power through mainframe or micro computers to work centers and functional areas in line with their specific requirement. This is done by increasing the use of data communication/net working and stand-alone operations.

Computerization is a major feature in the corporation's pursuit of effective Management information systems. It will also result in controlling expenses and boosting earnings.

6.3.2 Reservation System

PIA's reservation system, REPAK, has been modified and upgraded extensively, to cover 64 international and 24 domestic stations. It includes the off-line international system as well. Computerized seat reservation facility has been recently extended to eight travel agencies in Pakistan. This goes along way in providing passengers with improved service.

6.3.3 Baggage Tracing

PIA's mainframe computer has been linked to the SITA computer in Atlanta, U.S.A. for effective and quick recovery of lost baggage and prompt claim settlement prior to the introduction of automation in this area.. It was virtually impossible to trace and match misplaced baggage.

6.3.4 Message Switching

Incoming telex messages can now be switched automatically by PIA's mainframe computer to various locations within the organization. Display terminals and local printers have now replaced the old teleprinters resulting in efficient receipt and transmittal of messages. This is another area where computers are saving money for PIA.

6.3.5 Computer Supper System

Major developments are underway in various functional areas of the organization for implementation of user driven on-line systems using the latest techniques available in the industry. The user is able to obtain and manage data in real time made by means of a computer terminal location in his office. Such access will provide him with the latest status in his area. The developments being provided this facility cover Engineering and Maintenance, Acquisition and Material Support, Finance, Flight operations, and Administration.

6.3.6 Flight Kitchen

The Flight Kitchen at Karachi Airport was commissioned in Feb.1971. It has further been expanded since then to meet the increasing requirements of PIA and foreign airlines, passing through Karachi international airport and designing meal uplift from the PIA's Flight Kitchen. The recent expansion program completed comprises a huge catering store complex near the Flight kitchen premises. This stores complex has the capacity of storage of catering items for four months requirements. When fully operational, the production capacity of this facility goes up from 12000 to 25000 meals per day.

6.3.7 Training

The PIA Training certre at Karachi is possibly the only airline training establishement where comprehensive instruction in all major fields is given under one roof. PIA has been training its pilots, mechanics, engineering, traffic-scale staff and cabin crew since 1956, but it was not until 1960 that all training facilities were amalgamated at one centralized place and expanded to train personnel in all fields. Training facilities available within the airline also include flight simulators for basic and recurrent training of pilots and other operational crew. Dc-10 cockpit procedure trainer and Boing 747 and A-300 cockpit systems simulators are also available for the training of pilots, Flight Engineers and Ground Engineers. Courses are conducted according to the requirements of the industry and the standards laid down by the Civil Aviation Authority (CAA) of the United Kingdom, the Federal Aviation Administration (FAA) of the United States and the International Civil Aviation Organization (ICAO). All courses are also approved by the Civil Aviation Authority of Pakistan.

Over two dozen airlines from Africa, Europe and Asia have used the PIA's facilities for the training of their pilots, maintenance engineers and other staff... The total number of such students exceeds 3000. A notable feature is the introduction of training on micro-computers. These courses are also being offered to large industrial organizations both in public as well as private sectors.

6.4 Organizational Structure

There are thirteen departments in PIA, these departments are; 1. M.D.Secretariat, 2. Acquisition and Material Support, 3, Administration, 4. Coordination, 5. Corporate Planning, 6. Customer Services, 7. Data Processing, 8. Engineering, 9. Finance, 10. Financial Planning, 11. Flight Operation, 12. General Services, and, 13. Marketing.

These departments vary in size, in number of divisions, and number of sections, as it is shown in following.

Department	Division	Section	Size
1. M.D. Secretariat		18	98
	1.Chairman Secretariat		
	2. M.D. Secretariat		
	3. Corporate Safety		
	4.Inspectorate & Quality		

Assurance

5. P.T.C.

2. Acquisition & Material Support	08	676

1. Acquisition Commercial
2. Acquisition Technical
3. Material Support

3. Administration	22	635

1. Industrial Relations
2. Legal Services
3. Manpower Planning
4. Personnel
5. P & Remuneration
6. Sports

4. Coordination	16	920

1. Internal Audit
2. Investigation
3. Public Relations
4. Secretary
5. Security
6. Vigilance

5. Corporate Planning	03	38

1. Economic & Route Planning
2. Fleet Planning

6.	**Customer Services**	17	5047

1. Customer Services Planning
2. Food Services
3. Facilitation
4. Flight Services
5. Pax Sales Planning
6. T.G.S.

7.	**Data Processing**	08	225

1. Data Processing Services

8.	**Engineering**	79	4600

1. Avoinic Overhaul
2. Base Maintenance
3. Development Engineering
4. Line Maintenance
5. Overhaul Power Plant
6. Project Planning
7. Quality Control

9.	**Finance**	25	961

1. Banking Control
2. Budget Management
3. General Accounting
4. Revenue Accounting

9.	**Financial Planning**	04	60

1. Risk Management
2. Financial Planning

10. Flight Operations	17	846

1. Central Control
2. CP North Sectts.
3. Flight Cord.
4. Flight Engg.
5. Flight Tech.
6. Flight Training
7. Fuel Control
8. Planning & Scheduling
9. Stand Insp. FE.
10. Stand Insp. P.

11. General Services	19	2253

1. Admin. Services
2. Communication
3. Medical
4. Motor Transport
5. Works

13. Marketing	24	2393

1. Cargo
2. International Affairs
3. Market Planning
4. Market Services

5. Pax Sales

6. Reservation Planning

Total	260	18752

6.5 Analysis of Performance of PIA During the Period 1982-1986.

PIA is one of the successful airlines in terms of profitability. It has made net operating profit during the periods 1982-1986. This net operating profit was increasing at a rapid rate till 1985, but decreased in 1986 compared of that of 1985, this could be due to the increase in fixed assets from 6,367.89 million Rs. in 1984 to 8, 639.36 million Rs. in 1985 or about 36 percent. This increase in fixed assets which might be due to the improvement in fleet by the addition of new planes to the fleet had its effect on the profitability of the year after i.e. 1986. This is because, the new additions of fixed assets had to be start to depreciate in the following year, thus the depreciation of these new assets affected the profitability of 1986. Another indication of the success of PIA is the revenue per employee which shows a rapid increase since 1982, from 322441 per employee in 1982 to 545833 in 1986. This indicates a good utilization of personal efforts.

The passenger load factor was another indicator of PIA progress. This load factor ranged from 63.8 % in 1982 to 65.7 % in 1986, this reflects that the idle capacity is about one third only in the average, which is much less than that of many other airlines. This high passenger load factor had its effect on the profitability and progress of PIA. This is reflected in the high revenue load factor which exceeded 50 % in all years, which was about 56 % in the average annually.

As for the financial soundness of PIA, the financial position of this firm indicates that, the following aspects reflect the good financial position of PIA. These indicators are;

1. All fixed assets are financed by long term source of financing, this will help PIA not to face difficulties of financing in the near future. The fixed assets to long term financing ratio was about 90 % which means that 90 % of the long term sources of financing was devoted to be invested in fixed assets, this indicates that none of the fixed assets is financed by short source of financing. This reflects the matching policy used by the firm to match long term sources of financing with long term assets, and short term sources of financing with short term assets.

2. PIA maintains liquid assets for daily transactions as well as for precautionary motives. The current ratio was more than 1:1 in all years, this reflects the ability

of PIA to repay its short term obligations easily.

3. The efficiency of the PIA is reflected by the asset turnover. Since PIA sells services rather than products. The revenues of PIA is considered as sales. The assets turnover ratio was about one time in most years, which indicates that each Rs. invested in assets generate 1 Rs. in revenues, this is considered good in a firm heavily with high fixed assets such as PIA.

4. The return on investment (ROI), and return on networth are another indicators for the efficiency of PIA. ROI was 7.2 percent in 1985, which is considered good, while return on networth was 19.3 percent in 1985. This indicates that PIA is a profitable business for its owners.

The above mentioned results reflect a good performance of PIA. The financial, Operation, Traffic, Personnel figures of the periods under examination are given in Tables 6.1, 6.2, 6.3, and, 6.4, below.

Table 6.1: Operational Activities of PIA During the Period 1982-1986.

Operations	1982	1983	1984	1985	1986
Route Kilometers	192,216	204,854	203,516	202,841	194,080
Revenue Kilometers flown (000)	45,337	45,232	46,753	48,047	51,217
Revenue Hours flown	83,879	87,030	90,898	93,077	99,124
Available Tonne Kilometers (000,000)	1,464	1,473	1,546	1,594	1,664

Source: PIA,(1987) "Basic Facts", PIA Press, Pakistan

Table 6.2: Personnel of PIA During 1982-1986

Personnel	1982	1983	1984	1985	1986
Average Number of Employees	21,918	20,017	19,796	20,273	19,459
Revenue Per Employee (Rs.)	322,441	423,186	460,338	502,762	545,833

Source:PIA,(1987) "Basic Facts", PIA Press, Pakistan.

Table 6.3: Traffic Figures of PIA during the periods 1982-1986

Traffic	1982	1983	1984	1985	1986
Revenue Passengers Carried (000)					
	3,202	3,408	3,554	3,707	3,988
Revenue Passengers Kilomeres (000)					
	6,246	6,659	6,758	6,895	7,062
Passenger Load Factor					
	63.8 %	67.2 %	64.6 %	65,7 %	65.7 %
Revenue Flight Tonne Kelometers (000)					
	236,331	232,585	253,751	296,691	312,482
Kgs.of Excess Baggage & Cargo (000)					
	79,818	83,241	83,492	96,815	98,429
Kgs. of Mail (000)					
	2,480	2,739	2,880	2,736	2,629
Revenue Tonne Kilometers (000)					
	816,108	848,950	876,863	930,677	959,323
Revenue Load Factor					
	55.7 %	57.6 %	56.7 %	58.4 %	58.0 %

Source: PIA, (1987), "Basic Facts", PIA Press, Pakistan.

Table 6.4: Financial Indicators of PIA Activities During the Period 1982-1986.

	1982	1983	1984	1985	1986
OPerating Revenue (Rs. in Millions)					
	7,067	8,470	9,112	10,192	10,621
Operating Expenses (Rs. In MillionS)					
	6,843	8,029	8,401	9,323	10,038
Operating Surplus (Rs. in Millions)					
	223,60	440,97	711,34	868,55	583.31
Fixed Assets (Rs. in Millions)					
	5,468	5,651	6,367	8,639	6.070
Current Assets (Rs. in Millions)					
	2,835	3,319	3,579	3,646	4,265
Current Liabilities (Rs. in Millions)					
	2,857	2,857	3,123	3,258	4,131
Long-Term Debts (Rs.in Millions)					
	3,028	3,217	3,324	4,692	5,241
Net Worth (Rs. in Millions)					
	2,702	3,051	3,795	4,614	5,515

Source: PIA, (1987) "Basic Facts", PIA Press, Pakistan.

6.6 Summary

This chapter aims at discussing the historical background of PIA, the activities, the organizational structure and the analysis of performance.

Several improvements have taken place in PIA since 1954 till 1986 reflected in the activities. PIA was the first to introduce the computer and automation in Pakistan, improvement in the reservation system to cover 64 international and 24 domestic stations. Several facilities were given to travel agents. Computers were utilized to trace baggage, and message switching, acquisition, material support, finance, flight operations, and administration.

Training centre was established, which is the only airline training establishment in all major fields. Organizational structure of PIA was presented. 13 departments with their divisions, sections and sizes were also presented.

Performance of PIA was evaluated and analysed. PIA was found to be financially sound in terms of profitability, liquidity, and efficiency.

This chapter is an introductory to the field work, thus, chapter seven is devoted to the research methodology and design.

Chapter Seven

Research Design And Methodology

7.1 Introduction

The aim of this study is devoted to the statement of the problem regarding the relationship between the size of an organization and the management characteristics which include, structural differentiation, administrative component, employee's attitudes, employee's behaviour, and organizational culture, and determining of the theoretical model of the relationships. For that purpose our study concentrated on the Indiks' (1965) Prototype Paradigm. In addition, this chapter will include, the research design and methods as well as the sample of the study and source of data, and finally the measures of the selected variables.

7.2 Statement of the Problem

Hall (1972-109) noted some problems regarding the impact of size on other organizational characteristics when he inquired:

> "Is the size of an organization the key to understanding what happens to the organization and its members? Or is size just an insignificant variable that only seems to be

> important, when in reality it is other factors that account for organizational characteristics?"

As we may have noticed earlier that size could be significant from both structural and behavioural point of view, therefore, Halls'(1972:109) second question seems to be irrelevant. From the structural point of view, Kasarda (1974:19) stated that:

> "Size has substantial implications for the composition of the administrative fabric of institutions."

While Worthy (1950: 172-73) noted from the behavioural point of view that:

> "Size is unquestionably one of the most important factors in determining the quality of employees relationships; the smaller the unit the higher the morale and vice versa".

Few attempts have been made to link the structural-behavioral effects of size together. Indik (1963:369) stated that:

> "although many social changes are attributed to increased organization size, until recently little systematic thinking has been done how the structural aspect of organization size affects organization functioning and through its functioning affects the attitudes and behaviour of members with reference to the organization".

Summing up the argument, the central questions to be conducted empirically by this study can be summarized in the following:

(I) What are the impacts of size to the structural aspects?

(a) What is the nature of the association between the size of the PIA's departments and their structural differentiation (vertical and horizontal)?

(b) What is the nature of the association between the size of the PIA's departments and the relative size of their administrative components?.

(c) What is the nature of the association between the structural differentiation and the relative size of the administrative component ?

(II) What are the impacts of size to the behavioural a s p e c t s ?

(a) what is the nature of the association between the size of the PIA's departments and selected attitudinal patterns of their employees ?.

(b) What is the nature of the association between the size of the PIA's departments and selected behavioural patterns of their employees ?.

(c) What is the nature of the association between the size of the PIA's departments and the selected organizational cultural patterns of the organization?

(d) What is the nature of the association among the attitudes and behaviour of the employees and the organizational culture in PIA?.

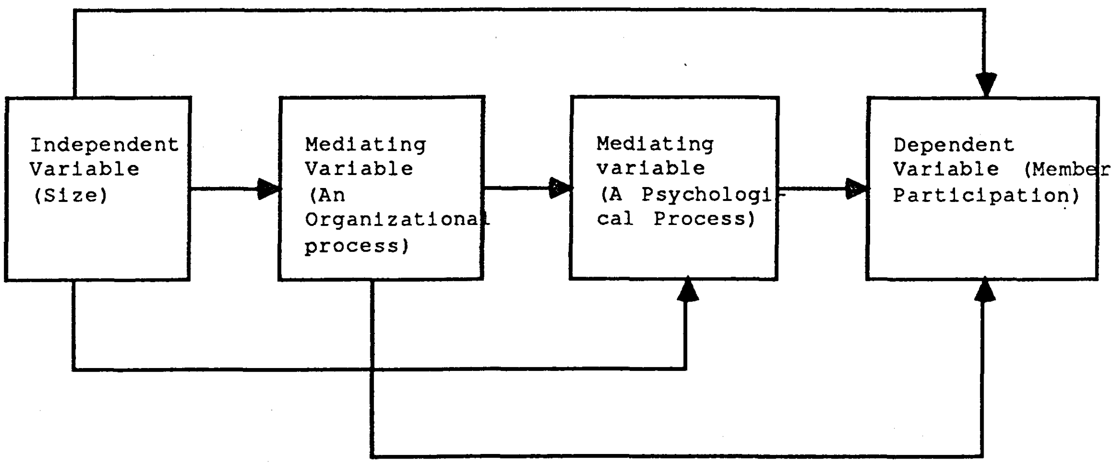
(III) What are overall structural-behavioural implications of the size of the PIA's departments?.

In the light of these questions, we will concentrate on Indik's (1965) study which was designed to explain an overall association between size, structure, and behaviour.

Indik's (1965) empirical investigation concentrated on three types of organizations. He (1965) examined data derived from 32 package delivery organizations (36 automobile sales dealership organizations, and 28 voluntary membership; educational-political organizations). The size ranged from 15-61 (package-delivery), from 25-132 (automobile dealership), from 101-2989 (voluntary organizations). His (1965) prototype paradigm is as it shown in the Figure 7.1 below.

In measuring his four organizational process, (communication, task specialization, control, and coordination), Indik (1965:342-44) used the mean scores for each unit on questionnaire items for all process except the task of specialization which was measured by the number of different job titles in the organization.

Figure 7.1: Prototype Paradigm (Indik: 1965)



Indik (1965) used also the mean scores for each unit on questionnaire items to measure the three psychological variables (attraction, satisfaction, and bureaucratic inflexibility).

Indik's (1965:344-45) data indicated that

> "Organization size is significantly negatively related to member participation".

He (1965) presented the "Schematic Diagram" which include four explanation proposed as plausible and possible which is shown in Figure 7.2 below.

Indik (1965:348) stated that on statistical grounds, "It is clear that explanation 1 (the communication-attraction linkage) is the most strongly correlated explanation in all three sets of organizations".

In an attempt to justify the reason why larger organization size leads to decreased member participation (a behavioural index), he (1965:348) proposed the following four explanations, which is shown in Figur 7.2:

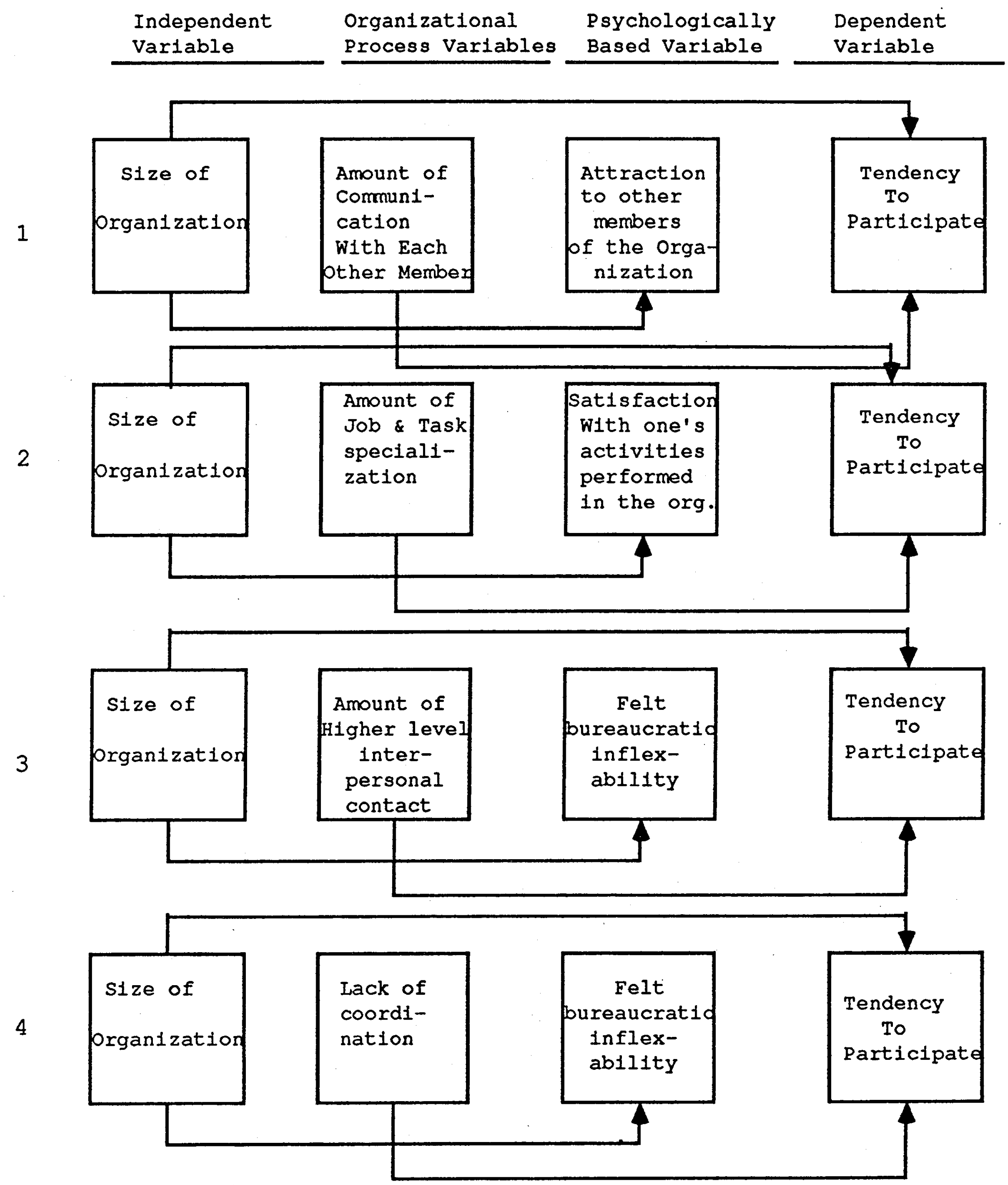
(I) Explanation I (p.345):

"In large organizations there are more potential and necessary communication linkages among the members, and that adequate communication is, therefore, less likely to be achieved. less adequate communication among members reduces the level of interpersonal attraction among members, and with this decline in attraction member participation rates decline".

(II) Explanation II (p.345)

"Large organizations tend to introduce higher degree of specialization...having more specialized duties tends to reduce the degree to which a person derives direct satisfaction from the performance of his work ...organization members will tend to participate at a lower rate in larger organizations because the job duties are less satisfying".

Figure 7.2: Schematic Diagram (Indik:1965)



(II) Explanation II (p.345)

"Large organizations tend to introduce higher degree of specialization...having more specialized duties tends to reduce the degree to which a person derives direct satisfaction from the performance of his work ...organization members will tend to participate at a lower rate in larger organizations because the job duties are less satisfying".

(III) Explanation III (p.347) :

"As organization size increases,there is a decrease in the amount of interpersonal control methods used at lower levels by higher- level (that is ,hierarchically distant) managers, and inturn, at lower levels of the organization, there is an increase in reliance upon impersonal (that is, bureaucratic, inflexible) forms of control. Finally, such reliance on bureaucratic inflexible controls over member behaviour is assumed to be repugnant to be members and to induce lower participation".

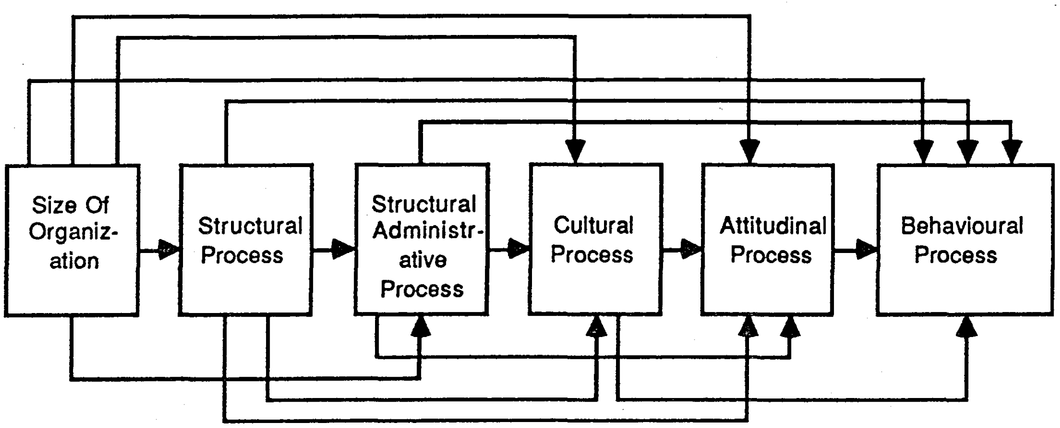
(IV) Explanation IV (p 348):

"organizations present greater difficulties in attaining internal coordination of activities. To offset such coordination problems, larger organizations introduce inflexible bureaucratic rules and regulations. Finally, it is proposed that member control through bureaucratic rules and regulations is less effective in generating attraction to the organizational situation than control through more personal and flexible methods,and thus results in lower rates of participation in larger organization".

In utilizing Indik's (1965) prototype paradigm and recalling the findings of studies reviewed previously, we will propose some conclusions regarding the structural-behavioural aspects of the size of organizations.

For the purpose of this research, Indik's (1965) prototype paradigm will be modified as in Figure 7.3.

Figure 7.3: A Modified Prototype Paradigm



7.3. Application of Indik's Modified Paradigm

In attempting to apply Indik's modified paradigm to the Pakistan International Airlines, we referred to the following indicators of each of the six variables in corporated in the empirical investigation. These are:

(I) Size of the department.

(II) Structural differentiation:

(a) Horizontal differentiation:- general division of labour (number of divisions in each department, number of sections in each department).

(b) Vertical differentiation: number of levels of authority and attributes of senior officials (age, education, and seniority).

(III) The size of Administrative component:-

(a) Administrative Ratios: The ratio between, on one hand, the number of senior officials, on one hand,and, the number of administrative professional, and clerical class on the other hand. And the ratio between the number of administrative-professional class to the number of sub-professional and labour class

(b) Span of control: number of subordinates under the supervision of officers.

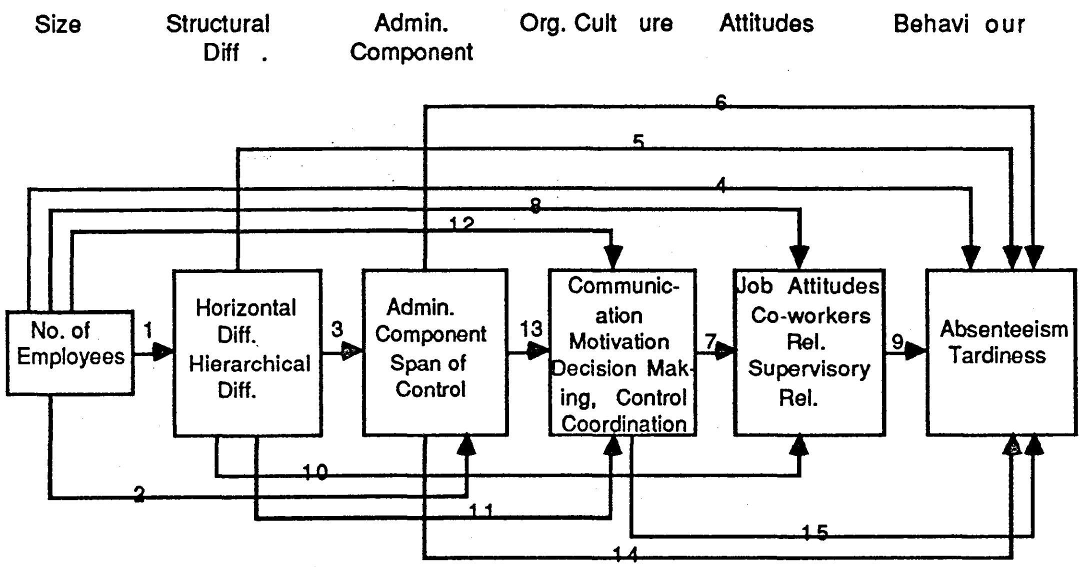
(iv) Attitudes: job attitudes, co-workers relationship, and supervisory relationship.

(v) Behaviour: Absenteeism, tardiness, and, responsibility preference (employee's opinions towards their responsibilities)

(vi) Organizational Culture: communication, motivation, decision-making, control, coordination, and, management perceptions.

According to the above indicators, and recalling Indik's modified paradigm, his chart will be utilized in our empirical investigation in the manner shown in Figure 7.4 below.

Figure 7.4: Application of Indik's Modified Paradigm



In attempting to explore the overall association between our six variables, fifteen relationships will be examined. These are, three structural relationships, (i) size-organizational structure; (ii) size-administrative component, and; (iii) organizational structure-administrative component. Six relationships are behavioural; (i) size-employee's attitudes; (ii) size-employee's behaviour; (iii) size-organizational culture; (iv) employee's attitudes-behaviour; (v) employee's attitudes-organizational culture, and; (vi) employee's behaviour-organizational culture. Other six are structural-behaviour relationships; (i) organizational structural-employee's attitudes; (ii) organizational structure-employee's behaviour; (iii) organizational structure-organizational culture; (iv) administrative component-employee's attitudes; (v) administrative component-employee's behaviour; and (vi) administrative component-organizational culture.

7.4 Research Design

The process of research involves several activities in which researchers are involved to come up with results concerning their enquiries. Research design is one of the important activities among them. There are two broad categories for the research designs, these are; experimental design and quasi-experimental design. Following is a brief discussion on each of them.

7.4.1. The Experimental Design

This type of design is usually used by physical scientists such as biologists, chemists,....etc. The researcher using this type of research must be in a position to do things such as randomly assign subjects to treatment and control conditions and introduce the treatment variable at an appropriate time. This high degree of control may be possible for studies conducted in the laboratory (Stone.E.F. 1978: 92).

Although the experimental design allows for more flexibility and the researcher is able to manipulates the introduction and variation of the predictor, thus helping him to illuminate the direction of causation from predictor to predicted variables, which makes this type of the design strong on internal validity.

The experimental design is weak on external validity. Stone (1978:98-100) stated the disadvantages of the experimental design in organizational research, these are;

1. Some phenomena can not be studied in the laboratory (e.g. natural disasters and the behaviour that accompanies them).
2. A number of variables can not be manipulated by experimenters (age, race, intelligence...etc.).
3. There are ethical and moral concerns with the manipulations associated with some experiments (i.e.subjects may experience psychological and / or physical harm).
4. The generality (external validity) of results produced through laboratory experimentation may be limited.
5. Laboratory settings may be lack "realism".
6. The strength of independent variables produced by experimental manipulations is very low when

compared to the strength of these same variables in "real-life" situations.

7. It is difficult to success fully manipulate more than three or four independent variables in any given experiment.
8. performing laboratory experiments successfully requires high skilled and creative experimenters.
9. Subjects may substitute their own tasks for those they are asked to perform by the experimenters.

Therefore, the experimental design is weak on external validity, furthermore, the use of this type of design can be very difficult for social and ethical considerations.

This barrier is specially true for the environment in which the present study was conducted.

7.4.2. The Quasi-Experimental Design

The quasi-experimental design may take several forms; Survey and case study. Following is a brief discussion on the advantages and the disadvantages of each .

A. Survey

The surveys are more common in the social sciences than other types of designs. The researcher using the survey type collects data directly from respondents in a systematic fashion. The setting in which the data are obtained is natural and assumed to not influence the values of measured variables, and the researcher doing a survey might be concerned with gaining familiarity with a population, describing a population, or the testing of hypotheses. A survey may also be used to predict future conditions.

Stone (1978:134-135) summarized the advantages and the disadvantages of the surveys. The followings are the advantages of the surveys:

1. The sample is chosen in such a way as to allow for generalizations to a defined population.
2. Results are accurate because of large sample sizes and generally low sampling error.
3. Random sampling procedures reduce or eliminate problems of sample bias.
4. Data collection takes place in "natural" settings.
5. Data are obtained directly from respondents.
6. Surveys often yield data that suggest new hypotheses.
7. If mailed questionnaires are used to collect data, the per subject cost of data is relatively low (compared, for example, to interview data).
8. A variety of systematic data collection methods (e.g. interviews, questionnaires, and observation) can be used alone or in combination.

While the disadvantages of the surveys are:

1. Decreased willingness of people to respond to sample survey.
2. Most surveys are "one-shot" (as opposed to the panel type in which repeated measures are taken on the same sample).
3. In terms of total cost, the sample survey is an extremely expensive research.
4. The standardized response formats of many sample survey measures (e.g. questionnaires and structured interviews) may force respondents to subscribe to statements they do not fully endorse.
5. If questionnaires are used to collect data, the proportion of returned questionnaires may be low.
6. Questionnaire and/interview measures may be"poor" indicants of the constructs studied by a researcher using the sample survey strategy.
7. Control over nuisance or confounding variables is poor. If such variables are controlled at all it must be through statistical means.
8. No independent variables are manipulated by the researcher using this strategy. As a result, causal inferences from sample survey-generated data are difficult to justify.

The survey can take one of two forms, the descriptive survey, and the analytic survey. The descriptive survey is concerned about describing rather than explaining relationships between variables, while the analytic survey aims at explaining and finding associations between variables. The analytic survey may also take several forms, these are; 1. The panel, which repeats observation on the same sample, 2. The longitudinal, which attempts to measure the phenomenon being studied before the respondents are exposed to the experiment variables and afterwards, and, 3. The correctional, which uses the post-test control group by applying some statistical techniques. An example of this type of design would be to ask respondents about their dispositions and to analyse these dispositions by investigating the effect of some variables (independent variables).

B. Case Study

Case studies usually aim at studying one unit of population at one point in time, describing this unit rather than testing hypotheses, studying the unit in detail and interpreting the results (S.Labovits and R. Higedorn: 1971).

Stone (1978:135-138) summarized the advantages and the disadvantages of the case studies, he stated the advantages as follows:

1. The full complexity of the unit under study can be taken into consideration.
2. Data collected is flexible.
3. The case study is a useful vechical for the generation of hypotheses and insights.

4. Data are collected in natural settings.
5. Case studies are generally less expensive research strategies than others.

On the other hand, the disadvantages are:

1. Causal inferences from case study data are impossible since there are no controls over confounding variables.
2. Hypotheses testing is not possible using case study data.
3. Generalization from a case study's findings is not possible.
4. Case studies are more time-consuming than other strategies.

As far as this study is concerned, three types of designs have been utilized in varying degrees. These are; 1. Case study, 2. Survey (correlational design), and, 3. Comparative study. The case study is the major design adopted in the examination of the relationships between size and our selected organizational variables in the thirteen departments in Pakistan International Airlines.

The longitudinal design is not appropriate because this study does not investigate the effect of introducing specific variable on the dependent variables. It only considers variables that might have an influence on the respondents's attitudes and behaviors. On the other hand, the panel design, does not meet the objectives of this research. This is attributed to the fact that it would have been hard to secure the willingness of the people for long period and due to the limitation of the time available to the research.

For these reasons together with the following factors makes the designs chosen for this research more appropriate.

1. This study attempts to find out the relationships and the associations between size and other organizational variables in the PIA's departments.

2. It intend to identify the overall structural-behavioral implications of the size of the PIA' departments.

3. It is the first comprehensive study of its type to be conducted on one of the biggest organizations in Pakistan public sector.

7.5. Research Methods

Research method can be classified into three main categories: Observation; unobtrusive measures; and asking questions (Nachmias and Nachmias,1981). Observations normally utilizes human observers such as participants or judges, or mechanical observers such as cameras and tap recorders. Unobtrusive measures, could be of two types; physical traces and archival records. The third research method and the most common in social sciences is asking questions which also takes the form of the questionnaire or the interview.

For the purpose of this study, observation and unobtrusive measures are not appropriate due to the time limit and the social and ethical considerations. The nature of the issues covered in the present study does not allow us to use physical traces. While the archival records could be used as supplementary to the techniques used in this study.

Asking questions is a more appropriate method for this research and most of the previous work on the relationships between size and the management characteristics has used this technique.

Three issues will be reflected on in discussing the procedures adopted by the study. These are, the specification of the PIA's sub-units to be examined; the description of our methods of sampling; and the statement of the sources of data and information pertinent to our variables.

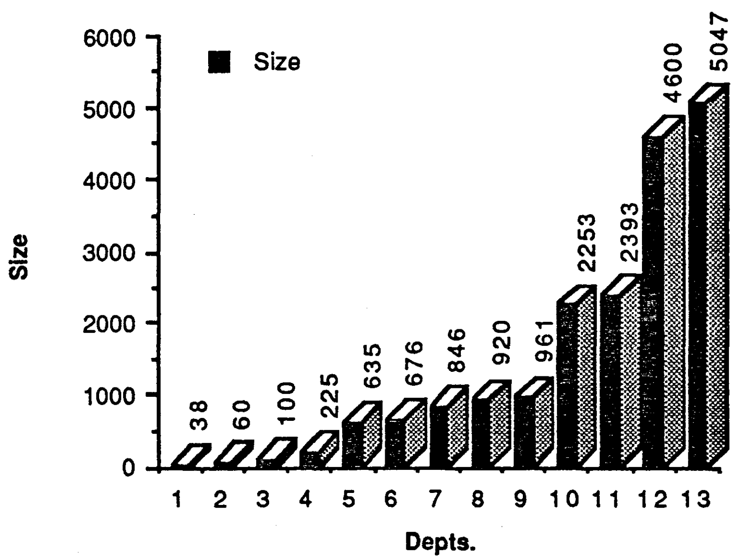
The total number of the PIA's employees in 1988 is almost 18800. These are distributed among various departments, and thy are categorized into three general classes. These are: (I) The senior officials (which include, senior officers and officers class), (II) The staff and clerical class, (III) The labour class.

Concentrating on the sub-units of the PIA. Thirteen departments have been specified. These are: (I) M.D.Secretariat, (II) Acquisition and Material Support, (III) Administration, (Iv) Coordination, (V) Corporate Planing, (VI) Customer Services, (VII) Data processing, (VIII) Engineering and Maintenance, (IX) Finance, (X) Financial Planing, (XI) Flight Operations, (XII) General Services, and (XIII) Marketing. Table 7.1 and Figure 7.5 show the distribution of the employees of 18754 among the thirteen departments.

Table 7.1: Distribution of the PIA's employee

Departments	Number Of Employees	% Of Total
1. Corporate Planing	38	0.20
2. Financial Planing	60	0.32
3. M.D.Secretariat	100	0.53
4. Data Processing	225	1.20
5. Administration	635	3.39
6. Acquisition	676	3.61
7. Flight Operation	846	4.51
8. Coordination	920	4.91
9. Finance	961	5.12
10.General Services	2253	12.01
11 Marketing	2393	12.76
12.Engineering Maint.	4600	24.53
13.Customer Services	5047	26.91
Total	18754	100

Figure 7.5: Distribution of the PIA's Employees Among the Departments.



These departments vary in sizes, the range is between 38-5047 employees. The department of "corporate planing" has the lowest size which is 38 employees, while the department of customer services has the highest size with 5047 employees.

7.6 Samples

The Options of certain sectors of the PIA's employees have been considered vital in our explanations regarding the following variables: these are; the size of the administrative component and organizational culture, and, the attitudinal and behavioural aspects.

Investigating the first two variables, questionnaire 1 (See Appendix II) as designed in an attempt to elucidate certain aspects of the administrative component and organizational culture; it was addressed to the PIA's senior officials and the officers in the thirteen departments. On the other hand, and illuminating the attitudinal and behavioural patterns of the PIA's employees, questionnaire 2 (see appendix III) was designed. It was distributed among the PIA's staff, technical and clerical as well as the workers.

Various conventional sampling methods were attempted by the study. In order to increase the representativeness of the sample, the study adapted, at varying degrees, stratification, clustering, and both single and multistage sampling techniques.

525 questionnaires were distributed among different classes of the employees in the thirteen departments, of which 458 employees responded. Table 7.2 below shows the responses of the employees.

Table 7.2: Responses of the Employees.

Departments	Senior officers D	Senior officers R	Officers D	Officers R	Staff D	Staff R	Workers D	Workers R	Total D	Total R
1.Corporate Plann.	1	1	9	6	3	2	2	2	15	11
2.Financial Plann.	1	1	9	6	3	2	2	2	15	11
3.M.D.Secretariat	2	2	9	5	2	2	2	2	15	11
4.Data Processing	1	1	10	9	7	6	2	2	20	18
5.Administration	2	1	14	14	14	13	10	10	40	38
6.Acquisition	1	1	9	9	20	13	10	10	40	33
7.Flight Operation	2	2	25	18	3	3	10	10	40	23
8.Coordination	1	1	9	9	20	15	10	10	40	35
9.Finance	1	1	14	14	15	14	10	10	40	39
10.General Serv.	2	1	18	14	30	25	10	10	60	50
11.Marketing	3	2	17	17	30	25	10	10	60	54
12.Engineering	2	2	25	23	33	30	10	10	70	65
13.Customer Serv.	2	2	25	18	33	30	10	10	70	60
Total	21	18	193	162	213	180	98	98	525	458
Percentage of the Responses	85.71		83.94		84.50		100.00		87.24	

7.6.1 Senior Officers And Officers Class

Table 7.3 below domenstrates the proportions of the senior officials in each department and the number of the representatives responded from each department:-

Table 7.3: The representatives of the Senior Officials class

Departments	Senior Officers			Officers			Total		
	No.	% of total	S	No.	% of total	S	No.	% of total	S
1. Corporate Plann.	3	11.11	1	24	88.89	6	27	100	7
2. Financial Plann.	3	7.14	1	39	92.86	6	42	100	7
3. M.D. Sectateriat	8	12.50	2	56	87.5	5	64	100	7
4. Data Processing	4	3.50	1	110	96.50	9	114	100	10
5. Administration	7	2.12	1	323	97.88	14	330	100	15
6. Acquisition	4	2.60	1	150	97.40	9	154	100	10
7. Flight Operat.	10	1.34	2	735	98.66	18	745	100	20
8. Coordination	6	3.61	1	160	96.39	9	166	100	10
9. Finance	5	1.23	1	402	98.77	14	407	100	15
10. General Serv.	7	1.44	1	479	98.56	14	486	100	15
11. Marketing	15	2.26	2	648	97.74	17	663	100	19
12. Engineering	8	0.44	2	1796	99.56	23	1804	100	25
13. Customer Serv.	8	0.84	2	944	99.16	18	952	100	20
Total	88	3.86	18	5866	96.14	162	5954	100	180

7.6.2. Staff And Labour Class.

In drawing up our sample of 278 among the staff and labour class in the thirteen departments, the distribution of the questionnaire among the departments was according to overall size in each department. The sample is drawn in the pattern displayed by Table 7.4 below.

Table 7.4: The Representatives of The Staff and Labour Class

Departments	Staff			Labour Class			Total		
	No	%	S	No	%	S	No	%	S
1. Corporate Plann.	5	45.45	2	6	54.55	2	11	100	4
2. Financial Plann.	10	55.56	2	8	44.44	2	18	100	4
3. M.D.Secretariat	26	72.22	2	10	27.78	2	36	100	4
4. Data Processing	103	92.79	6	8	7.21	2	111	100	8
5. Administration	247	80.98	13	58	19.02	10	306	100	23
6. Acquisition	358	68.58	13	164	31.42	10	522	100	23
7. Flight Operat.	45	44.55	3	56	55.45	10	101	100	13
8. Coordination	623	82.63	15	131	17.37	10	754	100	25
9. Finance	511	92.24	14	43	7.76	10	554	100	24
10.General Sesrv	1379	78.04	25	388	21.96	10	1767	100	35
11.Marketing	1301	75.20	25	429	24.80	10	1730	100	35
12.Engineering	2313	82.73	30	483	17.27	10	2796	100	40
13.Customer Serv	2682	65.50	30	1413	34.50	10	4095	100	40
Total	9603	72.04	180	3197	27.96	98	12800	100	278

The overall responses were good, from which 458 employees responded from the total employees received questionnaires of 525 employees, including 18 senior officers responded out of 21. And 162 employees from the staff and clerical class were responded out of 193. As far as the labour are concerned, the study attempted limited number policy to be distributed among them due to the difficulty to contact them and because most of them are uneducated, therefore, two sets of the questionnaires were distributed among each of the following departments: corporate planning, financial planning, M.D.Secretariat and department of data processing services, and ten sets of questionnaires have been distributed among each of the other departments.

7.7. Sources Of Data.

Carrying out our empirical investigation, primary as well as secondary sources of data have been consulted in one stage or another. The main sources of the primary data have been questionnaires, interviews and personal observations. The PIA's reports and records provided the bulk of our secondary data.

Questionnaire 1 (see appendix II), which was administered to the PIA's senior officials (which include, senior officers and officers), concentrates on issues pertinent to the attributes of the senior officials and certain aspects of communication, coordination, control, decision making, and, management perceptions. While questionnaire 2 (see appendix III), which was administered to the PIA's staff, clerical and workers, concentrated on issues related to the PIA's employees personal attributes, job evaluation, co-workers relations, supervisory relations and other attitudinal and behavioural issues.

The major sources of our secondary data included the PIA's records, reports, organizational chart, and files.

7.8 Measures

Regarding our measures, we will concentrate on the measures of the size of the PIA's departments, their structural differentiation, the relative size of their administrative components, the organizational culture, and, finally, the attitudinal and behavioural patterns manifested by their employees.

7.8.1 The Size of the PIA's Departments

Some of the measures reviewed in our survey of literature proved either inapplicable or difficult to be operationalized. Measures such as turn over and value added, we realized, that it could hardly represent measures as far as the size of the PIA's departments are concerned. On the other hand, measures such as total assets and net assets, were difficult to operationalize.

Two measures of the size of the departments have been attempted by the study. These are the number of employees in each department, and, the total wages and salaries paid by each department.

Although a positive and significant rank correlation coefficient between the size of the thirteen departments in terms of: (a) the total number of employees and (b) the total salaries and wages paid out has been detected with regards to the totals of both variables, the study computed the coefficient of correlation with regard to each category of employment as well as the totals. Table 7.5 below shows the results.

Table 7.5: Correlation between the total number of employees and the total salaries and wages

Category Of Employment	r	Significance
Senior Officers	0.964	<0.001
Officers	0.999	<0.001
Staff and clerical class	0.734	<0.005
Labour	0.998	<0.001
Total employees	0.985	<0.001

The above table shows both measures of size are highly correlated. The first measure interprets of size of any department in terms of the number of its employees; while the second one interprets the size in terms of the total annual salaries and wages paid out by the department. It has been suggested that both measures are strongly and significantly correlated.

7.8.2 Structural Differentiation

In our review of literature concerning structural differentiation in organizations, it has been argued that students of organization have been attempted various measures to this variable. The most conspicuous one is the measure which perceives the structural differentiation in organizations as an amalgam of three distinct forms of differentiations. These are horizontal differentiation, hierarchical differentiation, and spatial dispersion. As our analysis is confined to the PIA's sub-units in one locality (Karachi), the third form of differentiation was omitted.

7.8.2.1 Horizontal Differentiation

Examining the horizontal differentiation in the PIA's departments, we used two major measures. The first measure is the "general division of labour" in each department, and the second measure is the PIA's organizational charts.

Regarding the first measure, the general division of labour is operationalized in terms of two indicators, these are:(I) the number of divisions in each department, (II) the number of sections in each department.

A division, is defined by this study as "the administrative unit which is supervised by an official who is directly and immediately accountable to the official in charge of the entire department".

A section is defined by this study as "the administrative unit which is supervised by an official who is directly and immediately accountable to the official in charge of the entire division".

These two measures of the general division of labour, we consider, provide a broad framework for the manner in which the functions of the various departments are allocated.

7.8.2.2. Hierarchical Differentiation

Examining the hierarchical differentiation in the structure of various departments was conducted by this study in terms of two measures, these are : (I) The number of levels of authority and (II) The special characteristics of senior officials. The first measure, the number of levels of authority-examines the shape of the hierarchy, its tallness-flatness.

The PIA's employees are arranged into four categories. These are, (I) Senior Officers, (II) Officers, (III)

Staff (technical, and, clerical class), and (IV) Workers. The following Table 7.6 would clearly demonstrates the above mentioned categories.

Table 7.6: PIA Categories of Employment

Departments	Sen. Off.	Officers	Staff	Workers	Total
1. Corporate Planning	3	24	5	6	38
2. Financial Planning	3	39	10	8	60
3. M.D. Secrateriate	8	57	24	9	98
4. Data Processing	4	110	103	8	225
5. Administration	7	323	247	58	635
6. Acquisition	4	150	358	164	676
7. Flight Operations	10	735	45	56	846
8. Coordination	6	160	623	131	920
9. Finance	5	402	511	43	961
10.General Services	7	479	1379	388	2253
11.Marketing	15	648	1301	429	2393
12.Engineering	8	1796	2313	483	4600
13.Customer Services	8	944	2682	1413	5047
Total	88	5867	9601	3197	18754

The second measure of hierarchical differentiation, the special characteristics of the senior officials, consists of the age, education, and seniority of the senior officers in each department.

7.8.3 The Relative Size of the Administrative Components

The study attempted two measures to operationalize the concept of "the relative size of the administrative component" in all the thirteen departments, these are: (I) direct measure, and, (II). span of control.

The direct type of measure, we mean the ratio between the number of organizational personnel who are engaged in administrative tasks and the number of the rest of the organizations's employees. The study attempted the ratio between the senior officials and the rest of the employees in each department. As far as the second type of measure, which is the span of control, is concerned, the study examined the number of the subordinates supervised by officers in the thirteen departments.

7.8.4. Organizational Culture

As far as the aspects of the organizational culture are concerned, they are based on questinnair I which was addressed to a sample of senior officials in all the thirteen departments.

It consist of twenty four questions. Seven of which examine, age, sex martial status, qualifications, and seniority; (questions nos. 1, 2, 3, 4, 5, 6, and 7). The other questions deal with aspects related to; (I) Control, (II) Coordination, (III) Communication, (IV) Decision making, and, (V) Management Perceptions.

So far as the quality of control aspects is concerned, the questionnaire included five questions to examine them, they concentrated on the relationship between the superiors and subordinates, and the methods used for dealing with absenteeism and granting permission for the subordinates to leave the workplace, (questions nos. 9, 10, 11, 12, and 13)

To examine the aspect of coordination, five questions included in the questionnaire, (nos. 14, 15, 16, 17, and 18) which are concentrated on the extant of awareness of problems as well as the daily work activities in each department and with other departments.

The questionnaire included five questions (nos. 18, 19, 20, 22, and 23) to examine the quality of communication aspect in PIA's departments which concentrated on the means of communication used concerning routine and non-routine work, as well as the degree of the response of the top management to each department's contact concerning routine and non-routine work communication.

As far as the management perceptions are concerned, the questionnaire included two questions (nos, 21 and 24) which concentrated on the management perception toward the authority available as well as the determining advancement in the organization.

7.8.5 Employees Attitudes And Behaviour

To assess the attitudes and behaviour of the PIA's employees, questionnaire 2 was addressed to a sample of 278 employees, 180 of them are staff and clerical class (which include sub-professional, technical and, clerical) and sample of 98 workers.

Questionnaire 2 consists of twenty five questions, seven of them deal with the personal attributes of the representatives, they include, sex, age, martial status, place of birth, qualification, and present and previous jobs, (questions nos. 1, 2, 3, 4, 5, 6, and 7). Other set of questions which is included in the questionnaire II examined work attitudes of PIA's employees,it concentrated on certain aspects regarding job attitudes and satisfaction, co-workers relationships, and supervisory relationships.

In regard to job attitudes and satisfaction, the study emphasized the employees motivation when taking up their jobs, their evaluations of their present jobs, and job rotation; (questions nos. 8, 9, 10, 11, 15, and 16).

In examining the aspect of co-workers relationships, the study examined the number of co-workers in the immediate workplace, number of the respondent's close friends, the frequency of meeting them outside the workplace; (questions nos. 17, 18, and 19).

The study examined the supervisory relationship aspect among the PIA's employees through, the assessment of the respondent's relationships with their immediate supervisors, the qualities expected in the supervisors, and the methods used by supervisors to give the subordinates permissions to leave the workplace for personal reasons (questions nos. 20, 21, and 22).

To examine the behavioural aspects, the study concentrated on the issues of absenteeism, tardiness, and, responsibility preference (employee's opinions toward their responsibilities), (questions nos. 23, 24,and, 25).

7.9 Summary

The main concern of this chapter has been devoted to the statement of the problem and the objectives of the study as well as the design and the methodology of this research. The methods and procedures adopted by the study in its empirical investigations concerning the relationships between the size of the PIA's department and their structural and behavioural aspects.

The study examined some theoretical arguments, which include the major investigations of the effect of size on the management characteristics, and the methods adopted to carry out such investigations.

One of the major investigations which our study concentrated on, is the Indik's (1965) prototype paradigm. For the purpose of this research, the Indik's (1965) prototype paradigm is modified regarding the structural-behavioural aspects.

In application of the Indik's modified paradigm to the Pakistan International Airlines, the study referred to the following indicators. These are; (I) Size of the department, (II) Structural differentiation which include (horizontal and vertical differentiation), (III) The size of the administrative components which is examined by the study through the administrative ratios as well as the span of control, (IV) Attitudes which is attempted and examined through, job attitudes, co-workers relationships, and the supervisory relationships, (V) Behaviour, which is through the employees absenteeism, tardiness and, responsibility preference, and finally, (VI) Organizational culture which is examined through communication, control, coordination, decision making, and, management perceptions.

The study reviewed some of the methods available for carrying out our empirical research. It has .been urged that these methods were attempted at various stages of the research. These are the case study, the internal comparison, and the survey methods.

Describing the PIA's sub-units, the study examined the PIA's employees which are categorized into three main groups, these are, (I) Senior Officials Class (which include, senior officers and officers), (II) Staff and clerical class, and (III) Labour Class.

The study examined also the distribution of the PIA's employees among the thirteen departments which have size ranged between 38-5047 employees.

Two sets of questionnaires were administered among the sample of 458 employees in PIA. First set was addressed to a sample of 180 employees of senior officers and officers concentrated on issues pertinent to the attributes of the senior officials and certain aspects of communication, coordination, control, coordination, and, management perceptions. While the other set of questionnaire which was administered to the PIA's staff, clerical and labours concentrated on issues related to the PIA's employees personal attributes, job evaluation, co-workers relations, supervisory relations and other attitudinal and behavioural issues.

Chapter Eight

Relationships Between Size and Structure

8.1 Introduction

This chapter aims at investigating in some details both the quantitative as well as qualitative aspects of the size of P.I.A. As for the quantitative aspects of the size, this will be explored by number of employees in each department and the classification of employment into the various employment categories. While the qualitative aspects will be tackled through the employees attributes (work-related, and non work-related attributes) and will be analysed in chapter nine.

In examining the structural differentiation in P.I.A.'s departments, this study will depend on the organizational chart (Appendix 1) and some other information provided by the organization in order to analyse the horizontal, hierarchical differentiation, and the relative size of administrative components. Horizontal differentiation will be analysed through the general division of labour. While the hierarchical differentiation will be attempted through the number of levels of authority in each department and the attributes of Senior Officials.

Three measures will be utilized in analyzing the relative size of administrative components, these are, first, the ratio between the Senior Officials, and the remaining employees in each department, second, the ratio between the Sub-Professional class and the labour class, and third, the span of control in the thirteen departments.

After discussing the size of each department and structural aspects in each of them, we will find out the relationships between the size and each of the structural aspects by utilizing the statistical technique of Chi-square and Correlation Coefficient among these variables.

8.2 Size of the Departments

Concentrating on the quantitative aspects of the size, 18752 employees are distributed among thirteen departments. These are: 1. Corporate Planning, 2. Financial Planning, 3. M.D.Secretariat, 4. Data Processing, 5. Administration, 6. Material Acquisitions, 7. Flight Operation, 8. coordination, 9. Finance, 10. General Services, 11. Marketing, 12. Engineering Maintenance, and, 13. Customer Services. Table 8.1 and Figures 8.1, 8.2 shows the distribution of the employees among the general categories (senior officials, sub professionals, and workers).

In fact most of the activities of any Airline are technical and professional ones, therefore, it is not strange to notice that high percentage of employees in all departments of the Airline are Senior Officials (i.e. Technical & professional people).

The number of employee Workers increases in departments which do not need too much skills, therefore, from the Table 8.1 and Figures 8.1, 8.2 below, the Customer Services department & Material Acquisitions department have more workers in comparison with other departments, because these departments need material handling, this is in contrast to other sophisticated departments such as Corporate Planning which needs special expertise, therefore, professionals are more than workers in this activity because workers are not able to do the planning function. This is evident from Table 8.1 and Figures 8.1, 8.2, that number of workers in the first four departments are lower than the number of workers in other departments.

Summing up the Findings in regard to the overall survey of the quantitative aspect, the survey indicates the following results: 1. The largest number of employees are in the category of the Sub Professional who constitute 51.2 % of the total followed by the Senior Administrative Officials (senior officers &officers) who constitute about 31.8% of the total, and finally the labour class with 3196 workers who constitute 17 % of the total.

2. The highest number of the Senior Administrative Officials concentrates in the department of Engineering

and Maintenance (1804 employees which constitutes 30.3 % of the total senior officials) while the highest number of Sub-Professionals (clerical and technical class) is in the department of Customer Services (2682 employees which constitutes 27.9 % of the total number of the SUb-Professional Class). As for the labour class the highest number is also in the department of Customer Services (1413 workers which constitute about 44.2 % of the total workers).

Table 8.1: Distribution of Employees Among the General Categories of Employment

Departments	Senior Officials		Sub. Prof.		Workers		Total	
	F	%	F	%	F	%	F	%
1.Corporate Plann.	27	71.0	5	13.2	6	15.8	38	100
2.Financial Plann.	42	70.0	10	16.7	8	13.3	60	100
3.M.D.Secretariat	65	66.0	24	24.5	9	9.2	98	100
4.Data Processing	114	50.7	103	45.8	8	3.6	225	100
5.Administration	330	52.0	247	38.9	58	9.1	635	100
6.Material Acquis.	154	22.8	358	53.0	164	24.3	676	100
7.Flight Operation	745	88.1	45	5.3	56	6.6	846	100
8.Coordination	166	18.0	623	67.7	131	14.3	920	100
9.Finance	407	42.4	511	53.2	43	4.5	961	100
10.General Serv.	486	21.6	1379	61.2	388	17.2	2253	100
11.Marketing	663	27.7	1301	54.4	429	17.9	2393	100
12.Engineering	1804	39.2	2313	50.3	483	10.5	4600	100
13.Customer Serv.	952	18.9	2682	53.1	1413	28.0	5047	100
Total	5955	31.8	9601	51.2	3196	17.0	18752	100

Figure 8.1: Distribution of Senior Officials

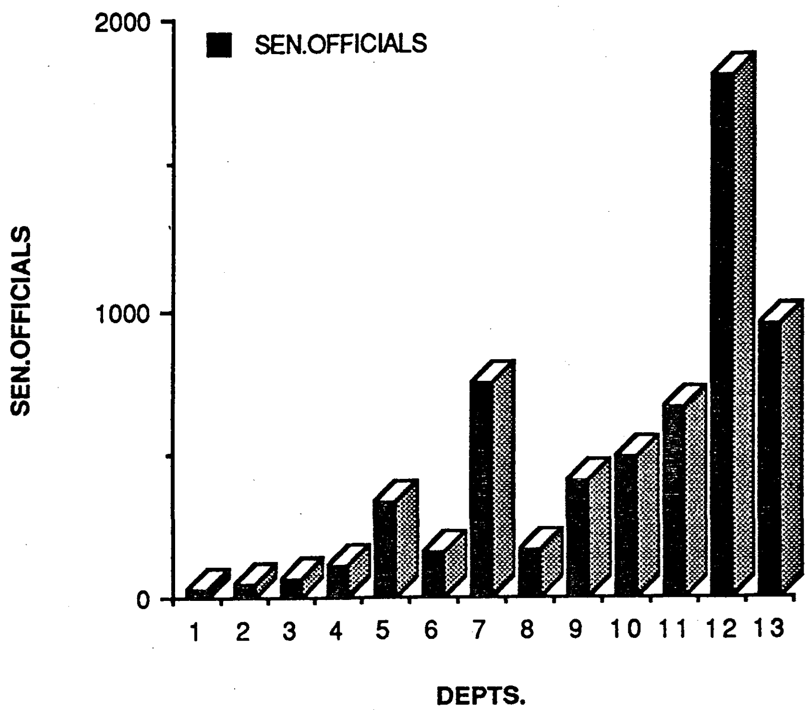
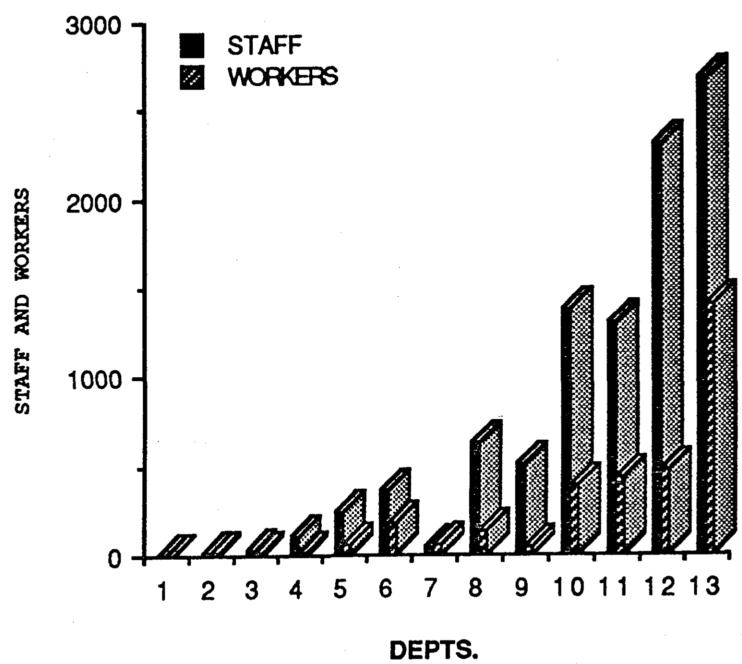


Figure 8.2: Distribution of Staff and Workers

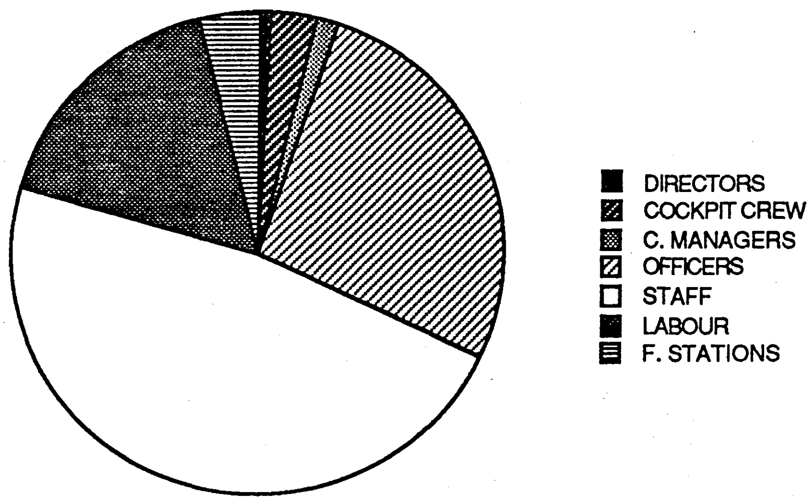


Those employees are distributed among different job titles as domenstrated in Table 8.2 and Figure 8.3 below. we notice that the number of staff (sub-prof., technical, and clerical class), constitutes the highest number of employees in PIA's (8934 employees, i.e.47 % of the total population), followed by the number of officers which is 5065 (i.e.27 % of the total). while the labour class are 3153 workers, (i.e.16.8 % of the total).

Table 8.2: Distribution of PIA's Employees By Job Titles

Job Titles	No. of Employees	Percentage
General Managers & Directors	90	0.5
Cockpit Crew	553	3.0
Corporate Managers	247	1.3
Officers	5065	27.0
Staff	8934	47.0
Labour Class	3153	16.8
At foreign stations	810	4.0
Total	18752	10

Figure 8.3: Distribution of the Employees By Job Titles



8.3 Structural Differentiation

In examining the structural differentiation of PIA's departments we will depend on the information supplied by PIA which include the organizational chart (see the Appendix 1) in order to concentrate on each of the PIA's departments, (horizontally and hierarchically). Following is a brief discussion of both horizontal and hierarchical differentiation.

8.3.1 Horizontal Differentiation

In analyzing the horizontal differentiation of each department's structure, we will examine them through the general division of labour. This study utilizes two measures to examine the general division of labour. These are, the number of divisions in each department and the number of sections in each division.

8.3.1.1 Number of Divisions

There are 63 divisions in PIA distributed among thirteen departments. Table 8.3 shows our findings in regard to the number of divisions in each department.

From Table 8.3 and Figure 8.4, we notice that there are some variations regarding the number of divisions in each departments. The average divisions is 4.8, while the number of divisions in the departments is between 1-10 divisions.

The highest number of divisions is 10 in the department of Flight Operation followed by the department of Engineering & Maintenance with 7 divisions, while on the other hand, the lowest number of divisions is one in the department of Data Processing, followed by two departments which are Corporate Planning and Financial Planning departments with two divisions in each.

Table 8.3: Number of Divisions

Departments	Divisions	%
1.Corporate Plann.	2	3.2
2.Financial Plann.	2	3.2
3.M.D.Secretariat	5	7.9
4.Data Processing	1	1.6
5.Administration	6	9.5
6.Material Acquis.	3	4.8
7.Flight Operation	10	15.9
8.Coordination	6	9.5
9.Finance	4	6.4
10.General Services	5	7.9
11.Marketing	6	9.5
12.Engineering Maint.	7	11.1
13.Customer Services	6	9.5
Total	63	100

We can conclude that the number of divisions increases in the departments which have more technical activities than others.

8.3.1.2 Number of Sections

260 sections are in PIA distributed among thirteen departments. Table 8.4 and Figure 8.4 show the distribution of sections and divisions in each department.

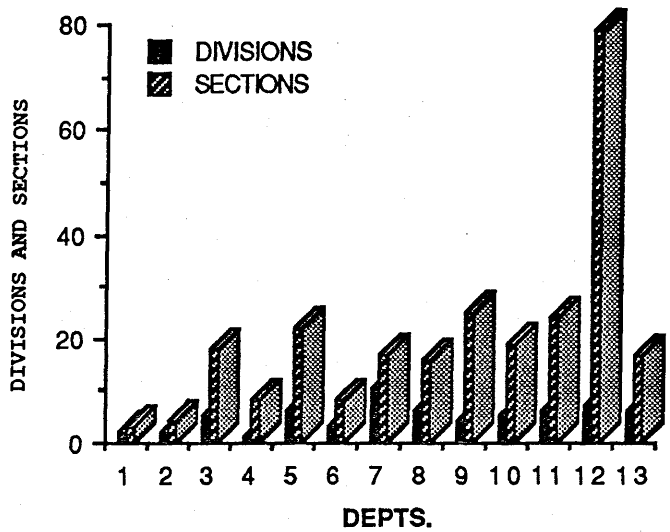
Table 8.4 and Figure 8.4 show that there are some variation in regard to both divisions and sections in each department. The average number of sections in each department is 20 sections, while the number of sections in the departments between 3-79 sections.

Table 8.4: Number of Divisions and Sections

Departments	Divisions No.	Divisions %	Sections No.	Sections %	Total No.	Total %
1.Corporate Plann.	2	3.3	3	1.2	5	1.5
2.Financial Plann.	2	3.2	4	1.5	6	1.9
3.M.D.Secretariat	5	7.9	18	6.9	23	7.1
4.Data Processing	1	1.6	8	3.1	9	2.8
5.Administration	6	9.5	22	8.5	28	8.7
6.Material Acquis.	3	4.8	8	3.1	11	3.4
7.Flight Operation	10	15.9	17	6.5	27	8.4
8.Coordination	6	9.5	16	6.2	22	6.8
9.Finance	4	6.4	25	9.6	29	9.0
10.General Serv.	5	7.9	19	7.3	24	7.4
11.Marketing	6	9.5	24	9.2	30	7.4
12.Engineering	7	11.1	79	30.4	86	26.6
13.Customer Serv.	6	9.5	17	6.5	23	7.1
Total	63	100	260	100	323	100

The highest number of sections in a division is 79 in the department of Engineering & Maintenance, followed by department of Finance with 25 sections. While on the other hand, the lowest number of sections is 3 in the department of Corporate Planning followed by department of Financial Planning with 4 sections.

Figure 8.4: Number of Divisions and Sections



8.3.2 Hierarchical Differentiation

In examining the hierarchical differentiation of PIA, this study utilizes two indicators. These are, 1. the number of levels of authority and, 2. the attributes of the senior officials in each department. Following is a brief discussion of these indicators.

8.3.2.1 Number of Levels of Authority

In focussing on the number of levels of authority, this study has entirely relied on the PIA's Organizational Chart (see the Appendix 1). The following Table 8.5 and

Figure 8.5 below demonstrates the number of levels of authority in each department and their percentages.

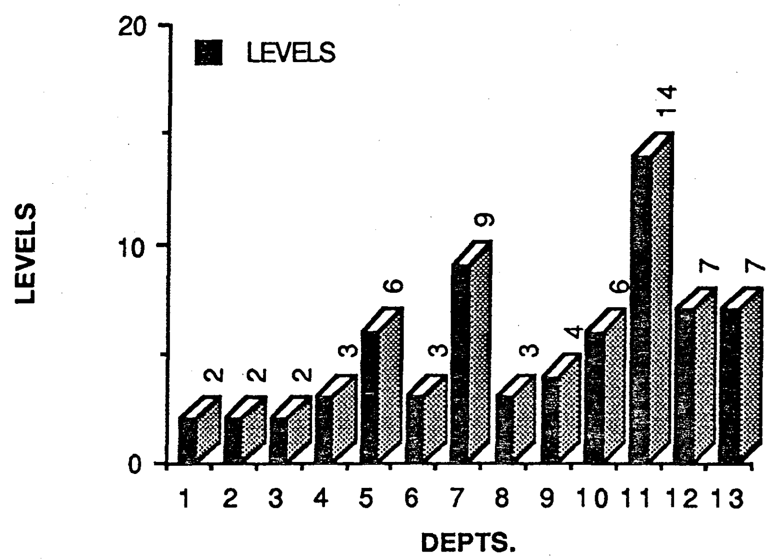
Table 8.5: Number of Levels of Authority

Departments	No. of Levels	%
1.Corporate Planning	2	3.0
2.Financial Planning	2	3.0
3.M.D.Secretariat	2	3.0
4.Data Processing	3	4.4
5.Administration	6	8.8
6.Material Acquisition	3	4.4
7.Flight Operation	9	13.2
8.Coordination	3	4.4
9.Finance	4	5.8
10.General Services	6	8.8
11.Marketing	14	20.6
12.Engineering Maint.	7	10.3
13.Customer Services	7	10.3
Total	68	100

From Table 8.5 and Figure 8.5, it is clear to note that number of levels increases simultaneously when size of departments increase. The exception, however, are Material Acquisition and Coordination departments in which there are three levels of authority in each.

in each. The highest number of levels is 14 in the department of Marketing. The departments of Corporate Planning, Financial Planning, and M.D. Secretariat share the lowest number of levels which is two in each of them.

Figure 8.5: Number of Levels of Authority



8.3.2.2 Attributes of Senior Officials

The study has concentrated on four of the attributes of the senior officials to examine whether it has relationships with the management characteristics. These attributes were also included to examine the hierarchical differentiation in the thirteen departments. These attributes are, (1) Age, (2) Qualifications, (3) Martial Status, and (4) Seniority. Following is a brief discussion of each of these attributes.

8.3.2.2.1 Age

Age was included in this study to examine whether it has relationships with the management characteristics. The study has categorized age into five age groups. They are 1. Less than 30 years, 2. Between 30-34 years, 3. Between 35-39 years, 4.Between 40-45 years, and, 5. Above 45 years. Table 8.6 shows the distribution of the different age groups. This Table shows that 91 of the Senior Officials are in the age group of between 40-45 years, this is evident from the mean score which was a little bit above the age of 40-45 years. The age of 55 of the Senior Officials exceeds 45 years, while the age of only 34 of them are between 35-39 years.

It is worth mentioning that none of the respondents was in the age below 35 years. No association is found between age and size of departments, the chi-square was found to be insignificant at any level. 70.4 % of the Senior Officials are in the age group of 35-45 years old.

Table 8.6: Age of Senior Officials

	35-39		40-45		Above 45		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	2	28.6	4	57.1	1	14.3	7	100
2.Financial Plann.	2	28.6	4	57.1	1	14.3	7	100
3.M.D.Secretariat	1	14.2	3	42.9	3	42.9	7	100
4.Data Processing	2	20.0	5	50.0	3	30.0	10	100
5.Administration	3	20.0	7	46.7	5	33.3	15	100
6.Material Acquis.	2	20.0	5	50.0	3	30.0	10	100
7.Flight Operation	5	25.0	8	40.0	7	35.0	20	100
8.Coordination	_	_	6	60.0	4	40.0	10	100
9.Finance	2	13.3	9	60.0	4	26.7	10	100
10.General Serv.	3	20.0	9	60.0	3	20.0	15	100
11.Marketing	3	15.8	11	57.9	5	26.3	19	100
12.Engineering	6	24.0	11	44.0	8	32.0	25	100
13.Customer Serv.	3	15.0	9	45.0	8	40.0	20	100
Total	34	18.8	91	51.6	55	29.6	180	100

8.3.2.2.2 Qualification

Many studies have conducted that education plays an essential role in influencing views and behaviour of employees. A comparison among the qualifications obtained by Senior Officials in thirteen departments are reflected in Table 8.7 below. The study has categorized the qualification obtained by Senior Officials into four groups. These are, 1.secondary, 2. diploma, 3. bachelor degree, and 4. higher degree. It is rather noticeable that the Senior Officials in PIA are highly educated.

Table 8.7: Qualification Of Senior Officials

	Bach.Degree		Higher Degree		Total	
Departments	F	%	F	%	F	%
1.Corporate Plann.	4	57.1	3	42.9	7	100
2.Financial Plann.	2	28.6	5	71.4	7	100
3.M.D.Secretariat	4	57.1	3	42.9	7	100
4.Data Processing	5	50.0	5	50.0	10	100
5.Administration	8	53.3	7	46.7	15	100
6.Material Acquis.	4	40.0	6	60.0	10	100
7.Flight Operation	8	40.0	12	60.0	20	100
8.Coordination	3	30.0	7	70.0	10	100
9.Finance	5	33.3	10	66.7	15	100
10.General Serv.	6	40.0	9	60.0	15	100
11.Marketing	7	36.8	12	63.2	19	100
12.Engineering	11	44.0	14	56.0	25	100
13.Customer Serv.	8	40.0	12	60.0	20	100
Total	75	41.7	105	58.3	180	100

Table 8.7 shows that, none of the senior officials

have a degree below Bachelor. 180 of the Senior Officials are distributed between only two groups. 75 of them (i.e. 41.7 %) are with Bachelor Degree and 105 of them (i.e. 58.3 %) with higher degrees. This is evident from the mean score which was between the Bach. Degree and Higher Degree. No association was found between the qualifications and departments, the chi-square was found to be insignificant at any level.

Generally Speaking, PIA's Senior Officials (which include senior officers and officers) are well educated, that is due to the nature of the business which needs more professional and specialized people and specially in the category of the Senior Officials.

8.3.2.2.3 Marital Status

This study has categorized marital status in to four groups, these are, 1. Single, 2. Married, 3. Divorced, and, 4. Widow. The results of the survey shown in the following Table 8.8. The result of our survey shows that the majority of the respondents (i.e. 160 out of 180 of the senior officials) are married due to their age groups, their age was mainly between 40-45 years, which in an Islamic Culture like Pakistan necessitates being married, and only 20 of them (i.e. 11.1 %) are single. It is worth mentioning that non of the respondents was in the categories "Divorced and Widow".

Table 8.8: Marital Status

Departments	Single F	Single %	Married F	Married %	Total F	Total %
1.Corporate Planning	2	28.6	5	71.4	7	100
2.Financial Planning	1	14.3	6	85.7	7	100
3.M.D.Secretariat	1	14.3	6	85.7	7	100
4.Data Processing	1	10.0	9	90.0	10	100
5.Administration	2	13.3	13	86.7	15	100
6.Material Acquisition	1	10.0	9	90.0	10	100
7.Flight Operation	3	15.0	17	85.0	20	100
8.Coordination	-	-	10	100.0	10	100
9.Finance	1	6.7	14	93.3	15	100
10.General Services	1	6.7	14	93.3	15	100
11.Marketing	2	10.0	17	89.5	19	100
12.Engineering Maint.	2	8.0	23	92.0	25	100
13.Customer Services	2	10.0	18	90.0	20	100
Total	20	11.1	160	88.9	180	100

8.3.2.2.4 Seniority

Three categories of Seniority have been specified in terms of the number of years of employment in P.I.A., these are , 1. Less than 12 years, 2. Between 13-20 years, 3. Above 20 years. Table 8.9 below shows our findings.

Table 8.9: Seniority of the Senior Officials

Departments	Less than 12 F	%	13-20 F	%	Above 20 F	%	Total F	%
1.Corporate Plann.	2	28.6	2	28.6	3	42.8	7	100
2.Financial Plann.	-	-	3	42.9	4	57.1	7	100
3.M.D.Secretariat	1	14.3	2	28.6	4	57.1	7	100
4.Data Processing	1	10.0	2	20.0	7	70.0	10	100
5.Administration	3	20.0	3	20.0	9	60.0	15	100
6.Material Acquis.	2	20.0	3	30.0	5	50.0	10	100
7.Flight Operation	5	25.0	2	10.0	13	65.0	20	100
8.Coordination	-	-	-	-	10	100.0	10	100
9.Finance	2	13.3	1	6.7	12	80.0	15	100
10.General Serv.	3	20.0	-	-	12	80.0	15	100
11.Marketing	1	5.3	3	15.8	15	78.9	19	100
12.Engineering	3	12.0	1	4.0	21	84.0	25	100
13.Customer Serv.	2	10.0	5	25.0	13	65.0	20	100
Total	25	13.9	27	15.0	128	71.1	180	100

The above Table demonstrates that 128 out of 180 of the Senior Officials (i.e. 71.1 %) have served in the organization for more than twenty years. 27 of them (i.e. 13.9 %) served for between 13-20 years while 25 of senior officials have served the organization for a period of less than 12 years.

8.3.3 Age, Qualification, and Seniority

In examining the relationships between the senior offiocial's attributes (age, qualification, and seniority), the following Table 8.10 summarizes our findings by using the Correlation Coefficient among them.

Table 8.10: Inter-Correlation Coefficient Among Age, Education, and Seniority

		Age & Seniority		Education & Seniority	
Departments	N	r	p	r	p
1.Corporate Planning	7	0.913	0.002	-	-
2.Financial Planning	7	0.769	0.02	-0.837	0.009
3.M.D.Secretariat	7	-	-	-	-
4.Data Processing	10	0.852	0.001	-0.449	0.05
5.Administration	15	0.726	0.001	-	-
6.Material Acquis.	10	-	-	-	-
7.Flight Operation	20	0.455	0.02	-0.310	0.05
8.Coordination	10	0.791	0.003	-	-
9.Finance	15	0.601	0.009	-0.414	0.05
10.General Services	15	0.712	0.001	-0.408	0.05
11.Marketing	19	0.597	0.003	-	-
12.Engineering Maint.	25	0.592	0.001	-0.513	0.004
13.Customer Services	20	0.368	0.05	-0.407	0.03

Table 8.10 indicates a significant correlation between age & seniority as well as between education & seniority.

It is noticeable from the above Table that the correlation between age & seniority is stronger than the correlation between education & seniority. The strongest correlation between age & seniority was found in the department of Corporate Planning, (i.e. $r = 0.913$, $p = 0.002$), followed by the correlation between same variables in the department of Data Processing, (i.e. $r = 0.852$, $p = 0.001$). On the other hand, the survey showed a significant negative correlation between education and seniority in most of the departments. The strongest correlation was found in the department of Corporate Planning, (i.e. $r = 0.837$, $p = 0.009$), followed by the correlation between the same variables in the department of Engineering & Maintenance, (i.e. $r = 0.513$, $p = 0.004$). It is worth mentioning here that no correlations were found between age & seniority as well as between education & seniority in two departments, these are, M.D. Secretariat, and Material Acquisition. While the survey showed that there are no correlation between education & seniority in six departments, these are, Corporate Planning, M.D. Secretariat, Administration, Material Acquisition, Coordination, and Marketing. It can be concluded that a significant positive correlation were found between age & seniority in PIA's departments, while a significant negative correlation between education &

seniority were found in PIA's departments. That means the people with higher age groups, have more years in service. And the people with high education, have served less in the Organization.

8.4 Relative Size of the Administrative Component

Examining the relative size of the administrative component in the thirteen departments, the study conducted two measures, these are, first, the administrative ratios, which include the ratio between the senior officials and the remaining employees in each department, and the ratio between the sub-professionals and labour class, and second, the span of control. Following is the brief discussion of these measures.

8.4.1 Ratio Between the Senior Officials and the Remaining Employees.

This ratio indicates the percentage of the Senior Officials to the rest of the employees which include the sub-professionals and workers. Table 8.11 below shows these ratios. It demonstrates that the ratio between the Senior Officials and the rest of the employees decreases as the size increases with exception of the ratio in the department of Flight Operations whose ratio is 7.4, that means, the majority of the employees in that department are officers. It is evident from Table 8.2 that the

Senior Officials constitute about 88.1 % of the total population in the department, which is due to the nature of activities in that department.

Table 8.11: The Ratio Between Senior Officials and Other Employees

Departments	S.O./Sub-prof.+ L
1. Corporate Planning	2.5
2. Financial Planning	2.3
3. M.D.Secretariat	1.8
4. Data Processing	1.0
5. Administration	1.1
6. Material Acquisition	0.3
7. Flight Operation	7.4
8. Coordination	0.2
9. Finance	0.7
10. General Services	0.3
11. Marketing	0.4
12. Engineering Maintenance	0.6
13. Customer Services	0.5

8.4.2 Ratio Between Sub-Professionals and Labour Class

This ratio indicates the percentage of the Sub-

Professionals which include the technical and clerical staff to the labour class. Table 8.12 below shows our finding. It shows that the majority of the ratios are similar except of two variation, first, in the department of Data Processing in which the ratio is 12.9,

Table 8.12: Ratio Between Sub-Prof. and Workers

Departments	Sub-Prof./Workers
1.Corporate Planning	0.8
2.Financial Planning	1.3
3.M.D.Secretariat	2.6
4.Data Processing	12.9
5.Administration	4.3
6.Material Acquisition	2.2
7.Flight Operation	0.8
8.Coordination	4.8
9.Finance	11.9
10.General Services	3.6
11.Marketing	3.0
12.Engineering Maintenance	4.8
13.Customer Services	3.0

and second, the department of Finance whose ratio is 11.9, which means that the number of workers employed in those department are very small as it is shown in Table 8.2 in which the percentage of workers in those departments are 3.6 4.5 of the total employees in those departments respectively.

8.4.3 Span of Control

Span of Control is examined to indicate the number of subordinates who are supervised by a senior officer in each of the respondents. This study has grouped the number of subordinates of the respondents into three categories, these are, 1. Less than 10, 2. Between 10-50, and 3. Above 50. Table 8.13 shows our findings, it shows that 88 of our respondents (i.e. 48.9 %) have between 10-50 subordinates, and 80 of the respondents (i.e. 44.4 %) have less than 10 subordinates but only 12 Senior Officials have more than 50 subordinates. Our findings also indicate that the span of control increases as the size of the departments increases.

Table 8.13: Number of Subordinates

Departments	Less than 10 F	Less than 10 %	Between 10-50 F	Between 10-50 %	Above 50 F	Above 50 %	Total F	Total %
1.Corporate Plann.	6	85.7	1	14.3	-	-	7	100
2.Financial Plann.	6	85.7	1	14.3	-	-	7	100
3.M.D.Secretariat	7	100.0	-	-	-	-	7	100
4.Data Processing	6	60.0	3	30.0	1	10.0	10	100
5.Administration	7	46.7	8	53.3	-	-	15	100
6.Material Acquis.	7	70.0	2	20.0	1	10.0	10	100
7.Flight Operation	16	80.0	2	10.0	2	10.0	20	100
8.Coordination	7	70.0	3	30.0	-	-	10	100
9.Finance	8	53.3	6	40.0	1	6.7	15	100
10.General Serv.	5	33.3	9	60.0	1	6.7	15	100
11.Marketing	2	10.5	15	79.0	2	10.5	19	100
12.Engineering	2	8.0	21	84.0	2	8.0	25	100
13.Customer Serv.	1	5.0	17	85.0	2	10.0	20	100
Total	80	44.4	88	48.9	12	6.7	180	100

8.5 Relationships Between Size, Structural Differentiation, and Relative Size of Administrative Component.

Having examined the size of the thirteen departments, their structural differentiation, and relative size of their administrative component, we now concentrate on the relationships between them by utilizing the Chi-square and the correlation coefficient techniques. In this respect we will be concerned with three specific relationships, these are: 1. Size and Structural Differentiation, 2. Size and the Relative Size of the Administrative Component, and 3. Structural Differentiation and the Relative Size of the Administrative Component.

8.5.1 Relationship Between Size and Structural Differentiation

The relationships between the size of thirteen departments and the structural differentiation (horizontal and hierarchical) are summarized in Table 8.14. It shows that there are significant correlation between the size of departments and the structural differentiation. From these findings it can be urged that:

1. Size is significantly correlated with the number of divisions in each department ($r = 0.488$, $p < 0.01$).

Recalling the data in Table 8.3, these findings are accordance with the distribution of the divisions among the thirteen departments which means that the number of divisions increases with the increase in the size of the departments. This is with exception of few cases in (Flight Operation and Data Processing departments).

Table 8.14: Relationship Between Size and Structural Differentiation

Structural Differentiation	r	p
1.Horizontal Differentiation		
A.Number of Divisions	0.488	<0.01
B.Number of Sections	0.557	<0.01
2.Hierarchical Differentiation		
A.Number of Levels of Authority	0.645	<0.01
B.Attributes of Senior Officials		
a.Age	0.504	<0.05
b.Education	0.255	<0.10
c.Seniority	0.137	<0.05

2. For the second indicator of the horizontal differentiation (which is the number of sections), our findings show that size is significantly correlated with

the number of sections in each division (i.e. $r = 0.557$, $p < 0.01$). It is evident from Table 8.4 that the number of sections is more in the larger departments than in the smaller departments with exception of two cases (M.D.Secretariat and Administration departments).

3. As far as the hierarchical differentiation is concerned, size is highly correlated with the number of levels of authority ($r = 0.645$, $p < 0.01$). Recalling the data in Table 8.5 which indicates that there are more levels of authority in large departments than in the smaller departments with some exceptions in regard to department of Coordination, and Finance.

4. For the association between the size of departments and the attributes of the senior officials, our findings indicate a significant correlation with age (i.e. $r = 0.504$, $p = 0.05$). And for the relationships between the size of departments and Seniority, our findings indicates weak correlation (i.e. $r = 0.137$, $p < 0.05$).

Summing up the findings, it can be argued that larger departments are characterized with their large number of divisions, by their large number of Sections, by large number of their levels of authority, and by the old age and more years in service of their Senior Officials.

8.5.2 Relationships Between Size and the Relative Size of the Administrative Component.

Our finding regarding the relationships between the size of the thirteen departments and their relative size of administrative component are shown in Table 8.15 below in which three aspects of the relative size of administrative component have been explored. These are, 1. The ratio between Senior Officials and the remaining employees in each department, 2. The ratio between sub-processionals and labour, 3. Span of Control.

Table 8.15: Relationships Between Size and the Relative Size of Administrative Component

Aspects	r	p
1.Ratio between S.O./Sub.Prof.+ L	-0.520	< 0.01
2.Ratio between Sub-Prof./ L	0.340	< 0.01
3.Span of Control	0.768	< 0.01

Table 8.15 above shows the relationships between size of thirteen departments and the aspects of the relative size of their administrative component, which indicate the following findings:

1. Size is negatively and significantly correlated with the ratio between Senior Officials and Sub Prof. plus the workers (i.e. $r = -0.520$, $p = < 0.01$). Recalling the data shown in Table 8.11 these findings is accordance with the distribution of the ratio among the thirteen departments which means that the ratio decreases as the size of the department increases with exception of department Flight Operation in which the majority of the employees in the department are Officers.

2. Size is significantly correlated with the ratio of Sub-Professionals and labour (i.e. $r = 0.340$, $p = < 0.01$). It is evident from Table 8.12 that the ratio is higher in the large departments than in the small departments with some exceptions in regard with department of Data Processing in which the percentage of Sub-Professionals constitute only 5.3 % of the total employees in the departments. These exceptions in our point of view due to the nature of the activity in each department.

3. Size is significantly correlated with the Span of Control (i.e. $r = 0.768$, $p = < 0.01$). Recalling the data shown in Table 8.13 and it could be noticed that the number of subordinates supervised by a senior officer have increased with the increase of size of the departments. From the finding shown in Table 8.15, it can be argued that the size of the departments is negatively correlated with the ratio between the senior officials

and other employees, and positively correlated with the ratio between sub-professionals and labour. And for the number of subordinate supervised by a senior official, it increases with the increase of the size of the departments.

8.5.3 Relationship Between Structural Differentiation and the Relative Size of Administrative Component

In examining the relationships between the structural differentiation and the relative size of administrative component, we will concentrate on two sets of correlations, these are, the correlation between the structural differentiation and the administrative ratios (which includes the ratio between the senior officials and other employees, and the ratio between the sub-professionals and labour class) and the correlation between the structural differentiation and the span of control. Table 8.16 summarizes our findings.

It can be argued that: 1. There is a significant correlation between the horizontal differentiation and the administrative ratios as well as with the span of control. Regarding the first aspect of the horizontal differentiation which is the number of divisions in each departments, the relationships found indicate that there is a significant positive correlation with the ratio between the senior officials and the sub-professionals plus labour, (i.e. r = 0.331, p = 0.04), while it is a significant negative correlation with the ratio between the sub-professionals to the number of workers in each department (i.e. r = -0.134, p = 0.01). On the other hand Table 8.16 shows a significant positive correlation with the span of control in each department (i.e. r = 0.233, p = 0.001).

Table 8.16: Relationship Between Structural Differentiation and Administrative Component.

Aspects of Structural Differentiation	S.O./Sub-Prof. +L r	S.O./Sub-Prof. +L p	Sub-Prof. /L r	Sub-Prof. /L p	Span of Control r	Span of Control p
1. Horizontal Differentiation						
A. Number of Divisions	0.331	0.04	-0.134	0.01	0.233	0.001
B. Number of Sections	-0.616	0.05	0.482	0.000	0.406	0.000
2. Hierarchical Differentiation						
A. Number of Levels of Authority	-	-	-0.139	0.04	0.356	0.000
B. Attributes of Senior Officials						
a. Age	-	-	-	-	0.216	0.05
b. Education	-	-	-	-	-	-
c. Seniority	-0.174	0.01	0.216	0.05	0.355	0.01

As for the second aspect of the horizontal differentiation, the findings shows that there is a highly significant negative correlation with the ratio between the senior officials to the remaining employees in each department (i.e. $r = -0.616$, $p = 0.05$), while it is a significant positive correlation with the ratio between the sub-professionals to the number of workers (i.e. $r = 0.482$, $p = 0.000$). And it is a significant positive correlation with the span of control in each department (i.e. $r = 0.406$, $p = 0.000$). 2. There is a significant correlation between some of the hierarchical aspects with the administrative ratios as well as with the span of control. Regarding the first aspect of the hierarchical differentiation which is the number of levels of authority, our findings in Table 8.16 shows that there is a significant positive correlation with the span of control (i.e. $r = 0.356$, $p = 0.000$) and a significant negative correlation with the ratio between the sub-professionals and the number of workers. As for the second aspect of the hierarchical differentiation (which is the attributes of the senior officials), our findings indicate a significant correlation (weak) between the seniority and the ratio between the senior officials and sub-professionals plus workers (i.e. $r = -0.174$, $p = 0.01$), and a significant correlation between the seniority and the ratio between the sub-professionals to the workers (i.e. $r = 0.126$, $p = 0.05$), and a significant negative correlation between the seniority and span of control (i.e. $r = -0.155$, $p = 0.01$). Also there is a significant correlation (weak) between the age and the span of control (i.e. $r = 0.126$, $p = 0.05$). 3. From the findings stated in Table 8.16, it can be argued that, the relative size of the administrative component is correlated more strongly and significantly with the horizontal differentiation than with the hierarchical differentiation, which means that with more divisions in a department, higher the ratio between the senior officials to the remaining employees and lower the ratio between the sub-professional to the workers, and higher the span of control in the department. And as the number of sections in a department increases, the ratio between the senior officials and the rest of the employees in that department decreases, the ratio between sub-professionals and number of workers increases, and the span of control increases too.

8.5.4 Relationship Between Size, Structural Differentiation and Relative Size of Administrative Component.

Bearing in mind the relationships stated in Tables (8.14, 8.15, and, 8.16), we will attempt to establish an overall association between the size of the PIA's departments, their structural differentiation, and the relative size of their administrative component. This overall associations could be summarized in the following:

1. Size of the department is highly and significantly correlated with horizontal differentiation (i.e. $r = 0.488$. $p < 0.01$ with number of divisions) and (i.e. $r = 0.557$, $p < 0.01$, with number of sections).

2. Size of each department is highly and significantly correlated with hierarchical differentiation (i.e. $r = 0.645$, $p = 0.01$ with number of levels of authority), and significantly correlated with the attributes of the senior officials (i.e. $r = 0.504$, $p = 0.05$ with age), and ($r = 0.137$, $p = 0.05$ with seniority).

2. Size of the department is highly and significantly correlated with the relative size of the administrative component (i.e. $r = 0.520$, $p = 0.01$ with the ratio between the senior officials and the rest of the employees), ($r = 0.340$, $p = 0.01$ with the ratio between the sub-professionals and number of workers), and ($r = 0.768$. $p = 0.01$ with the span of control).

3. Horizontal differentiation is strongly and significantly correlated with the relative size of the administrative component (i.e. $r = 0.331$, $p = 0.04$, between number of divisions and the ratio between senior officials and the remaining employees), ($r = -0.134$, $p = 0.01$ number of division and the ratio between the sub-professionals and number of workers), ($r = -0.233$, $p = 0.001$ number of divisions and the span of control), ($r =$

-0.616, p = 0.05 number of sections and the ratio between the senior officials and the remaining employees), (r = 0.482, p = 0.000 the number of sections and the ratio between the sub-professionals and number of workers), (r = 0.406, p = 0.000 between number of sections and span of control).

4. Hierarchical differentiation is significantly correlated with the relative size of the administrative component (i.e. r = -0.139, p = 0,04 between the number of levels of authority and the ratio between the sub-professionals and the number of workers, r = 0.356, p = 0.000 between number of levels of authority and the span of control).

8.6 Summary

This chapter has been devoted to examine the relationships between the size of departments and its structural differentiation. In regard to the size of the departments in PIA, the total number of employees are 18752 distributed among thirteen departments, which they vary in size. The smallest department in term of number of employees is the department of Corporate Planning, in which, there are 38 employees, followed by the department of Financial Planning which consists of 60 employees. The largest department is the department of Customer Services which constitutes 5047 employees, followed by the department of Engineering and Maintenance which has 4600 employees.

The largest number of employees are in the category of Sub-Professionals who constitutes 51.2 % of the total population. Workers constitutes about 16.8 % of the total.

This chapter also examined the horizontal as well as the hierarchical differentiation of PIA's structure. Regarding the horizontal differentiation, it was measured through the general division of labour which include the number of divisions in each department and the number of sections in each division.

As far as the number of divisions are concerned, there are 63 divisions in PIA, distributed among the thirteen departments, the highest number of divisions was found in the department of Flight Operation which has ten divisions and the lowest number of divisions was found in the department of Data Processing which has one division.

AS for the number of sections, there are 260 sections in PIA's departments, the highest number of sections was found in the department of Engineering and Maintenance with 79 sections followed by 25 sections in the department of Finance. The lowest number of sections was found in the department of Corporate Planning with three sections, followed by four divisions in the department of Financial Planning.

This chapter has explored the hierarchical differentiation in PIA through the number of levels of authority and through the attributes of the Senior Officials. As for the number of levels of authority, they are 68 distributed among the thirteen departments, the highest number of levels of authority is 14 was found in the department of Marketing, followed by 7 in each of the following two departments, Engineering and Maintenance, Customer Services. The lowest number of levels of authority was found 2 in in each of the following three departments, these are, Corporate Planning, Financial Planning, and M.D.Secretariat. Our findings indicate that number of levels of authority increases, as size of a department increases.

As for the second measure of the hierarchical differentiation, which is the attributes of the Senior Officials, the study has concentrated on four of them, they are, age, qualification, marital status, and seniority, in order to find whether they have a relationships with the management characteristics. The inter-correlations among age, qualification, and seniority indicates that there is a significant positive relationship between age and seniority which means that employees with high age group have more years in service in the organization and vise versa. And a significant negative relationship between education and seniority, that means higher the education, lower is the seniority.

This chapter analysed the relative size of the administrative component in each department through: a. the ratio between the senior officials and the remaining employees in each department, b. the ratio between the sub-professionals and labour class, and, c. span of control. The analyses indicates that the ratio between the senior officials and the remaining employees is higher in the smaller departments than in the larger ones, and the ratio between the sub-professionals and the labour class is more in the larger departments than in the smaller ones. Same results were found in regard to the span of control, which means that higher span of control was found in the larger departments than in the smaller ones.

After a detail discussion on the size of the departments and their structural differentiation, this chapter established relationships between size and structural differentiation (horizontal and hierarchical), and a relationship between size of departments and the relative size of their administrative component, and finally a relationship between the structural differentiation and the relative size of administrative component. The results indicates the following: 1. there is a significant positive relationship between size and the structural differentiation in the departments. 2. there is a significant negative relationship between size of the department and the ratio between the senior officials and the remaining employees in each department. 3. there is a significant positive relationship between size and the ratio between the sub-professionals and the labour class in each department, 4. there is a significant positive relationship between size and the span of control in each department.

Regarding the relationships between structural differentiation and administrative component, following results were found: 1. there is a positive significant relationship between number of divisions with the ratio between senior officials and the remaining employees as well as with the span of control, 2. there is a significant negative relationship between number of divisions and the ratio between the sub-professionals and labour class, 3. there is a significant positive relationship between number of sections and the ratio between the sub-professionals and labour as well as with the span of control, 4. there is a significant negative relationship between number of sections and the ratio between the senior officials and the remaining employees in each department.

For the relationships between the hierarchical differentiation and the administrative component, following results were found: 1. there is a significant negative relationship between number of levels of authority and the ratio between the sub-professionals and labour class, 2. there is a significant relationship between the number of levels of authority and the span of control, 3. there is no significant relationship between the number of levels of authority and the ratio between the senior officials and the remaining employees in the departments.

As for the relationship between the attributes of the senior officers and the administrative component are concerned, the following relationships were found: 1. there is no significant correlation between age and both of the administrative ratios, 2. there is a significant correlation between age and seniority, 3. there is no significant correlation between education and both of the administrative ratios as well as with the span of control, 4. there is a significant negative correlation between seniority and the ratio between the senior officials and the remaining employees in the department, 5. there are significant positive correlation between seniority and each of the following administrative components, the ratio between the sub-professionals and labour class, and the span of control in each department.

Chapter Nine

Organizational Relationships of PIA

9.1 Introduction

In Order to highlight the findings of the second stage of our empirical survey, it is important to examine certain aspects that relate to size, and organizational culture. This chapter aims to investigate in some detail the relationship between size and organizational culture in PIA. In this context, this chapter will summarize our findings in regard to three issues. These are: 1. the qualitative aspects of size of PIA's departments, 2. the PIA's organizational culture, and, 3. relationship between size and organizational culture.

In discussing the qualitative aspects of size of PIA in each departments, two issues ought to be stressed, these are ; the non-work related attributes and the work-related attributes. In analyzing the former, the following factors need to be considered, these are: 1. Age, 2. Sex, 3. Marital Status, 4. Place of Birth, 5. Qualifications, and, 6. Previous Employments. On the other hand, four of the work-related attributes will be tackled, these are; 1. Seniority, 2. Training, 3. Training Period, and, 4. Training relation to the work activities. Finally we will utilize the correlation coefficient and chi-square statistical techniques to find the relationships and the association between them.

9.2 Size of Departments-Qualitative Aspects

In examining the size of each department, we will concentrate on two sets of attributes; these are, 1. non work-related attributes, which includes, age, sex, marital Status, qualification, place of birth, and previous employments. 2. work-related attributes which includes, seniority, training, training period, training relation to work. Following is a brief discussion of each of them.

9.2.1 Non Work-Related Attributes

The study has concentrated on six non work-related attributes of employees to examine whether it has relationships with the management characteristics. These attributes are, 1. age, 2. sex, 3. marital status, 4. qualification, 5. place of birth, and, 6. previous employment. Following is a brief discussion of each of them.

9.2.1.1 Age

The study has categorized age into five groups, these are 1. less than 30 years, 2. between 30-34 years, 3. between 35-39 years, 4. between 40-45 years, and, 5. above 45 years. Table 9.1 shows the distribution of age groups among the thirteen departments.

Table 9.1: Age of Employees

Depts. No.	Less than 30		Between 30-34		Between 35-39		Between 40-45		Above 45		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
1.	-	-	1	25.0	3	75.0	-	-	-	-	4	100
2.	-	-	2	50.0	2	50.0	-	-	-	-	4	100
3.	-	-	2	50.0	2	50.0	-	-	-	-	4	100
4.	-	-	3	37.5	4	50.0	1	12.5	-	-	8	100
5.	1	4.3	7	30.4	8	34.8	6	26.1	1	4.4	23	100
6.	2	8.7	6	26.1	11	47.8	3	13.0	1	4.4	23	100
7.	-	-	2	15.4	5	38.5	4	30.8	2	15.4	13	100
8.	4	16.0	8	32.0	7	28.0	4	16.0	2	8.0	25	100
9.	5	20.0	5	20.8	6	25.0	6	25.0	2	8.3	24	100
10.	9	25.7	7	20.0	9	25.7	7	20.0	3	8.6	25	100
11.	6	17.1	8	22.6	9	25.7	9	25.7	3	8.6	35	100
12.	7	17.5	12	30.0	11	27.5	6	15.0	4	10.0	40	100
13.	7	17.5	10	25.0	12	30.0	9	22.5	2	5.0	40	100
Total	41	14.7	73	26.3	89	32.0	55	19.8	20	7.2	278	100

Table 9.1 shows that 89 out of 278 of the employees, (i.e. 32.0 %) are in the age group of 30-34 years, 55 of

them, (i.e. 19.8 %) are in the age group between 40-45 years, 41 of the respondents, (i.e. 14.7 %) are less than 30 years of age, while only 20 of the respondents, (i.e. 7.2 %) are above 45 years of age. It is worth mentioning here, that the respondents in the first four departments are in the age group between 30-39 years. And a majority of 258 out of 278 of the employees are in the age of less than 45 years old.

9.2.1.2 Sex

Our survey indicates that the majority of our respondents are male, 237 out of 278 (i.e. 85.3 %) as it is shown in Table 9.2.

Table 9.2: Sex

	Male		Female		Total	
Departments	F	%	F	%	F	%
1.Corporate Planning	4	100.0	-	-	4	100
2.Financial Planning	4	100.0	-	-	4	100
3.M.D.Secretariat	4	100.0	-	-	4	100
4.Data Processing	8	100.0	-	-	8	100
5.Administration	13	56.5	10	43.5	23	100
6.Material Acquis.	21	91.3	2	8.7	23	100
7.Flight Operation	13	100.0	-	-	13	100
8.Coordination	23	92.0	2	8.0	25	100
9.Finance	16	66.7	8	44.3	24	100
10.General Services	35	100.0	-	-	35	100
11.Marketing	22	62.9	13	37.1	35	100
12.Engineering Maint.	40	100.0	-	-	40	100
13.Customer Services	34	85.3	6	15.0	40	100
Total	237	85.3	41	14.7	278	100

Table 9.2 indicates that the female constitutes 41, (i.e. 14.7 %) of the total sample. It is worth mentioning here that number of female is concentrated in departments of Administration, Marketing, and Finance.

9.2.1.3 Marital Status

This study has categorized Marital Status in to four groups, these are: 1. Single, 2. Married, 3. Widow, and, 4. Divorced. Our findings are summarized in Table 9.3 below.

Table 9.3: Marital Status

Departments	Single		Married		Others		Total	
	F	%	F	%	F	%	F	%
1.Corporate Planning	-	-	4	100.0	-	-	4	100
2.Financial Planning	-	-	4	100.0	-	-	4	100
3.M.D.Secretariat	-	-	4	100.0	-	-	4	100
4.Data Processing	-	-	8	100.0	-	-	8	100
5.Administration	1	4.3	19	82.6	3	13.1	23	100
6.Material Acquis.	4	17.4	19	82.6	-	-	23	100
7.Flight Operation	-	-	11	84.6	2	15.4	13	100
8.Coordination	6	24.0	17	68.0	2	8.0	25	100
9.Finance	6	25.0	17	70.0	1	4.2	24	100
10.General Services	13	37.1	20	57.1	2	5.7	35	100
11.Marketing	7	20.0	27	77.1	1	2.9	35	100
12.Engineering Maint.	10	25.0	28	70.0	2	5.0	40	100
13.Customer Services	11	27.5	26	65.0	3	7.5	40	100
Total	58	20.9	204	73.4	16	5.7	278	100

From Table 9.3, it is clear that the majority of our respondents, 204 out of 278 (i.e. 73.4 %) are married and 58 of them are singles (i.e. 20.9 %), but only 16 of them (i.e. 5.7 %) are either widows or divorced.

9.2.1.4 Place Of Birth

This study has grouped the place of birth aspect in to two categories, these are, 1. Village, 2. Town. Table 9.4 below shows our findings.

Table 9.4: Place of Birth

	Village		Town		Total	
Departments	F	%	F	%	F	%
1.Corporate Planning	2	50.0	2	50.0	4	100
2.Financial Planning	3	75.0	1	25.0	4	100
3.M.D.Secrateriat	2	50.0	2	50.0	4	100
4.Data Processing	4	50.0	4	50.0	8	100
5.Administration	7	30.0	16	69.6	23	100
6.Material Acquis.	12	52.2	11	47,8	23	100
7.Flight Operation	8	61.5	5	38.5	13	100
8.Coordination	12	48.0	13	52.0	25	100
9.Finance	10	41.7	14	58.3	24	100
10.General Services	14	40.0	21	60.0	35	100
11.Marketing	13	37.1	22	62.9	35	100
12.Engineering Maint.	21	52.5	19	47.5	40	100
13.Customer Services	17	42.5	23	57.5	40	100
Total	125	45.0	153	55.0	278	100

Table 9.4 shows that the majority of 153 out of 278 of the respondents (i.e. 55 %) are from towns, but 125 of them (i.e. 45 %) are from villages.

9.2.1.5 Qualification

This study has categorized qualification aspects into five groups, these are, 1. below secondary, 2. secondary, 3. diploma, 4. bachelor's degree, and 5. higher degree. Table 9.5 below shows our findings.

Table 9.5: Qualification

Depts	Below Secondary		Secondary		Diploma		Bach. Degree		Higher Degree		Total	
No.	F	%	F	%	F	%	F	%	F	%	F	%
1.	2	50.0	-	-	-	-	2	50.0	-	-	4	100
2.	2	50.0	-	-	-	-	2	50.0	-	-	4	100
3.	2	50.0	-	-	1	25.0	1	25.0	-	-	4	100
4.	2	25.0	1	12.5	1	12.5	4	50.0	-	-	8	100
5.	5	21.7	5	21.7	5	21.7	8	34.8	-	-	23	100
6.	7	30.4	3	13.0	1	4.3	12	52.2	-	-	23	100
7.	10	76.9	-	-	-	-	2	15.4	1	7.7	13	100
8.	8	32.0	2	8.0	4	16.0	8	32.0	3	12.0	25	100
9.	10	41.7	-	-	1	4.2	11	45.8	2	8.3	24	100
10.	10	28.6	1	2.9	5	14.3	16	45.7	3	8.6	35	100
11.	10	28.6	2	5.7	6	17.1	13	37.1	4	11.4	40	100
12.	10	25.0	3	7.5	4	10.0	19	47.5	4	10.0	40	100
13.	10	25.0	3	7.5	5	12.5	17	42.5	5	12.5	40	100
Total	88	31.7	20	7.2	33	11.9	115	41.4	22	7.9	278	100

Table 9.5 indicates that 115 of the respondents (i.e. 41.4 %) are with Bachelor's degrees, 88 of them (i.e.

31.7 %) are with below secondary school, 33 of the respondents (i.e. 11.9 %) are with Diplomas, 22 of them (i.e. 7.9 %) with higher degrees, and only 20 of them (i.e. 7.2 %) with secondary schools. It is worth mentioning here that there are no higher degrees found in the first six departments, that means higher degrees were found in the large departments.

9.2.1.6 Previous Employments

This study has categorized the previous employments into four groups, these are: 1. none, 2. one, 3. two, and, 4. more than two. Table 9.6 below summarizes our findings.

Table 9.6: Previous Employments

Depts.	None		One		Two		More than Two		Total	
No.	F	%	F	%	F	%	F	%	F	%
1.	-	-	2	50.0	2	50.0	-	-	4	100
2.	3	75.0	1	25.0	-	-	-	-	4	100
3.	-	-	2	50.0	1	25.0	1	25.0	4	100
4.	-	-	4	50.0	3	37.5	1	12.5	8	100
5.	4	17.4	7	30.4	8	34.8	4	17.4	23	100
6.	5	21.7	8	34.8	7	30.4	3	13.1	23	100
7.	1	7.7	3	23.1	5	38.5	4	30.7	13	100
8.	6	24.0	5	20.0	8	32.0	6	24.0	25	100
9.	5	20.8	3	12.5	4	16.7	12	50.0	24	100
10.	10	28.5	8	22.9	8	22.9	9	25.7	35	100
11.	9	25.7	12	34.3	10	28.6	4	11.4	35	100
12.	8	20.0	16	40.0	8	20.0	8	20.0	40	100
13.	5	12.5	12	30.0	10	25.0	13	32.5	40	100
Total	56	20.1	83	29.9	74	26.6	65	23.4	278	100

From Table 9.6, 83 of the respondents (i.e. 29.9 %) have one previous employments, 74 of the respondents (i.e. 26.6 %) have two previous employments, and 65 of them (i.e. 23.4 %) have more than two previous employments, but only 56 of them (i.e. 20.1 %) have no previous employments. It is worth mentioning here that it can be noticed from Table 9.6, that there are more previous employments in large departments than in the small departments.

9.2.2 Work-Related Attributes

This study has concentrated on four non-related attributes to examine whether they have relationships with the management characteristics of the organization. These attributes are, 1. seniority, 2. training, 3. training period, and, 4. training relationships to the work activities. Following is a brief discussion of these attributes.

9.2.2.1 Seniority

This study has categorized the seniority aspect into three groups. These are, 1. less than 5 years, 2. between 5-10 years, 3. more than 10 years. Table 9.7 below summarizes our findings, which shows that the majority of the respondents, 143 out of the 278 (i.e. 51.4 %) are with between 5-10 years of service in PIA, 78 of respondents (i.e. 28.1 %) are with more than 10 years of service in PIA. While 57 of them (i.e. 20.5 %) are with less than 5 years of service in the organization.

Table 9.7: Seniority

Departments	Less than 5		Between 5-10		More than 10		Total	
	F	%	F	%	F	%	F	%
1.Corporate Plann.	-	-	1	25.0	3	75.0	4	100
2.Financial Plann.	-	-	2	50.0	2	50.0	4	100
3.M.D.Secretariat	-	-	2	50.0	2	50.0	4	100
4.Data Processing	-	-	2	25.0	6	75.0	8	100
5.Administration	1	4.3	13	56.5	9	39.1	23	100
6.Material Acquis.	2	8.7	14	60.9	7	30.4	23	100
7.Flight Operation	-	-	6	46.2	7	53.8	13	100
8.Coordination	8	32.0	13	52.0	4	16.0	25	100
9.Finance	6	25.0	10	41.7	8	33.3	24	100
10.General Serv.	10	28.6	18	51.4	7	20.0	35	100
11.Marketing	9	25.7	19	54.3	7	20.0	35	100
12.Engineering	11	27.5	21	52.5	8	20.0	40	100
13.Customer Serv.	10	25.0	22	55.0	8	20.0	40	100
Total	57	20.5	143	51.4	78	28.1	278	100

It is worth mentioning here that employees in the small departments have served more in the organization than in the large departments.

9.2.2.2 Training

This aspect is tested to examine the number of employees in each department who do have training while joining the organization and those who do not have training. Therefore, this study has grouped this aspect into two categories, these are, 1. have training, and 2. do not have training. Table 9.8 below summarizes our findings.

Table 9.8: Training

	Yes		No		Total	
Departments	F	%	F	%	F	%
1.Corporate Plann.	-	-	4	100.0	4	100
2.Financial Plann.	-	-	4	100.0	4	100
3.M.D.Secretariat	-	-	4	100.0	4	100
4.Data Processing	-	-	8	100.0	8	100
5.Administration	-	-	23	100.0	23	100
6.Material Acquis.	15	65.2	8	34.8	23	100
7.Flight Operation	13	100.0	-	-	13	100
8.Coordination	12	48.0	13	52.0	25	100
9.Finance	-	-	24	100.0	24	100
10.General Serv.	12	34.3	23	65.7	35	100
11.Marketing	-	-	35	100.0	35	100
12.Engineering	28	70.0	12	30.0	40	100
13.Customer Serv.	14	35.0	26	65.0	40	100
total	94	33.8	184	66.2	278	100

Table 9.8 shows that 184 of the respondents (i.e. 66.2 %) have no training, and 94 of the respondents (i.e. 33.8 %) do have training while joining the organization with different period of time. It is worth mentioning here that the departments whose activities are technical usually do have training for their employees.

9.2.2.3 Training Period

This study has grouped the training period aspect into three categories, these are, 1. less than one month, 2. between 1-2 months, and, 3. more than two months. Table 9.9 below shows our findings.

Table 9.9: Training Period

Departments	Less than one		Between 1-2		Morethan two		Total	
	F	%	F	%	F	%	F	%
6.Material Acquis.	8	53.3	-	-	7	46.7	15	100
7.Flight Operation	10	76.9	2	15.4	1	7.7	13	100
8.Coordination	7	58.3	2	16.7	3	25.0	12	100
10.General Serv.	-	-	7	58.3	5	41.7	12	100
12.Engineering	10	35.7	7	25.0	11	39.3	28	100
13.Customer Serv.	-	-	5	35.7	9	64.3	14	100
Total	35	37.2	23	24.5	36	38.3	94	100

Table 9.9 shows the number of employees in our sample who have had training while joining the organization, it also shows the training period in each department. From above Table 9.9, 36 out of 94 of the employees (i.e. 38.3 %) have training for more than two months, 35 out of 94 of the employees (i.e. 37.2 %) have less than one month training, and 23 of them (i.e. 24.5 %) have had between 1-2 months training.

9.2.2.4 Training Relationships to Work Activities

This aspect is attempted to examine whether the training which the employees had are related to the work activities or not. This study has grouped this aspect into three categories. These are: 1. very much related, 2. related to some extant, 3. not related. Table 9.10 below shows our findings.

Table 9.10: Training Relationship to Work Activities

Departments	To some extant		Not related		Total	
	F	%	F	%	F	%
6.Material Acquisition	5	33.3	10	66.7	15	100
7.Flight Operation	7	53.8	6	46.2	13	100
8.Coordination	9	75.0	3	25.0	12	100
10.General Services	11	100.0	-	-	11	100
12.Engineering Maint.	17	60.0	11	39.3	28	100
13.Customer Services	9	64.3	5	35.7	14	100
Total	58	62.4	35	37.6	93	100

Table 9.10 shows that 58 of the employees out of 93 (i.e. 62.4 %) think that the training is related to some extant to the work activities, and 35 of them (i.e. 37.6 %) think that the training they had are not related to work activities.

9.3 Organizational Culture

Five cultural variables were examined to explain the nature of the organizational culture in PIA. These are, 1. Control, 2. Communication, 3. Coordination, 4. Decision Making, and, 5. Management Perceptions. In the following is a brief discussion of each of these variables.

9.3.1 Control

In examining the control aspects in the organization, the study has emphasized the following:

1. The relationships between the superiors and the subordinates.

2. Ways in which the subordinates apply for permission to leave the work place.

3. The superior's responses to the subordinates application to leave the work place.

4. The superior's responses to the lateness of the subordinates.

5. Lateness time allowed by superiors. Following is a

brief discussion of these aspects.

9.3.1.1 The Relationships Between the Superiors and the Subordinates

The study has categorized the relationships between the superiors and subordinates into five groups, these are, 1. very good, 2. good, 3. uncertain, 4. bad, and, 5. very bad. Table 9.11 below summarizes our findings.

Table 9.11: Relationships Between Superiors and Subordinates

	V.good		Good		Uncertain		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	2	28.6	3	42.9	2	28.6	7	100
2.Financial Plann.	2	28.6	4	57.1	1	14.3	7	100
3.M.D.Secretariat	2	28.6	3	42.9	2	28.6	7	100
4.Data Processing	2	20.0	5	50.0	3	30.0	10	100
5.Administration	4	26.7	7	46.7	4	26.7	15	100
6.Material Acquis.	3	30.0	5	50.0	2	20.0	10	100
7.Flight Operation	5	25.0	10	50.0	5	25.0	20	100
8.Coordination	1	10.0	9	90.0	-	-	10	100
9.Finance	2	13.3	8	53.3	5	33.3	15	100
10.General Serv.	2	13.3	10	66.7	3	20.0	15	100
11.Marketing	2	10.5	14	73.7	3	15.0	19	100
12.Engineering	4	16.0	14	56.0	7	28.0	25	100
13.Customer Serv.	4	20.0	11	55.0	5	25.0	20	100
Total	35	20.8	103	56.5	42	22.0	180	100

As it is displayed in the Table 9.11 above, one can notice that the majority of the respondents, 103 out of 180 (i.e. 56.5 %) have good relationships with their subordinates, and 35 of them (i.e. 20.8 %) described the relationships as very good, wile only 42 of the respondent (i.e. 22 %) have said that they are uncertain. It is worth mentioning here that no respondent described the relationship as bad, and the total of 138 out 180 (i.e. 77.3 %) have a good relationships with their subordinates.

9.3.1.2 Ways in Which the Subordinates Apply For Permission to Leave the Work Place

In examining the ways in which the subordinates apply for permission to leave the work place, the study has grouped this aspect into three categories, these are: 1. In writing, 2. Verbally, and, 3. Without asking. Table 9.12 shows our findings.

It could deduced from Table 9.12, that the majority of the respondents, 115 out of 180 (i.e. 64.7 %) expect their subordinates to verbally ask for permission to leave the work place, while 65 of them (i.e. 35.3 %) expect their subordinates to apply for permission in writing. In addition, no subordinate leaves the work place with out asking for a permission.

Table 9.12: Ways for Applying for Permission to Leave Workplace

Departments	In writing F	In writing %	Verbally F	Verbally %	Total F	Total %
1.Corporate Planning	3	42.9	4	57.1	7	100
2.Financial Planning	2	28.6	5	71.4	7	100
3.M.D.Secretariat	3	42.9	4	57.1	7	100
4.Data Processing	2	20.0	8	80.0	10	100
5.Administration	6	40.0	9	60.0	15	100
6.Material Acquis.	2	20.0	8	80.0	10	100
7.Flight Operation	8	40.0	12	60.0	20	100
8.Coordination	4	40.0	6	60.0	10	100
9.Finance	6	40.0	9	60.0	15	100
10.General Services	5	33.3	10	66.7	15	100
11.Marketing	7	36.8	12	63.2	19	100
12.Engineering Maint.	10	40.0	15	60.0	25	100
13.Customer Services	7	35.0	13	65.0	20	100
Total	65	35.3	115	64.7	180	100

9.3.1.3 The Superior's Responses to the Subordinate's Application to Leave the Work Place

In examining the third aspect of the control system (which is the superior's responses to the subordinate's application to leave the work place) as part of the organizational culture, The study has grouped the responses of the superior's to the subordinates application to leave the work place into three categories, these are, 1. By considering their local leaves, 2. By not considering their local leaves, and 3. By keeping a note in the subordinate's record. This classification will indicate the way, the subordinates leave the work place from the superior's point of view. Table 9.13 shows our findings.

Table 9.13: Superior's Response to Subordinates's Applications to Leave the Work-Place

	Consider		Not Consider		Keeping A note		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	2	28.6	1	14.3	4	57.1	7	100
2.Financial Plann.	1	14.3	2	28.6	4	57.1	7	100
3.M.D.Secretariat	2	28.6	2	28.6	3	42.9	7	100
4.Data Processing	4	40.0	2	20.0	4	40.0	10	100
5.Administration	6	40.0	3	20.0	6	40.0	15	100
6.Material Acquis.	2	20.0	2	20.0	6	60.0	10	100
7.Flight Operation	6	30.0	6	30.0	8	40.0	20	100
8.Coordination	2	20.0	2	20.0	6	60.0	10	100
9.Finance	4	26.7	2	13.3	9	60.0	15	100
10.General Serv.	5	33.3	2	13.3	8	53.3	15	100
11.Marketing	5	26.3	4	21.1	10	52.6	19	100
12.Engineering	5	20.0	5	20.0	15	60.0	25	100
13.Customer Serv.	5	25.0	3	15.0	12	60.0	20	100
Total	49	27.2	36	20.0	95	52.7	180	100

It could be deduced that the majority of the respondents, 95 out of 180 (i.e. 52.7 %) grant the subordinates permission to leave the work place by keeping a note in the subordinates files. However, 49 of the respondents (i.e. 27.2 %) grant the subordinates permission to leave the work place by considering their local leave, while, 36 of them (i.e. 20.0 %) grant permission without considering their local leave.

9.3.1.4 The Superior's Responses to the Tardiness of the Subordinates

In treating the fourth control aspect, which is the superior's responses to the lateness cases of the subordinates, the study has categorized the responses into three groups. These are, 1. asking for a written explanation, 2. not asking for any written explanation, and 3. considering other factors. The purpose of this classifications is to find whether there are specific rules and regulations common in all the departments in regard to the responses of the superiors to the lateness cases of the subordinates. Table 9.14 summarizes our findings.

Table 9.14 shows that the majority of the superiors, 99 out of 180 (i.e. 54.4 %) prefer considering other factors in dealing with the lateness cases. 45 of them (i.e. 25 %) prefer asking for written explanation, while 36 of them (i.e. 20.6 %) do not.

Table 9.14: Explanation For the Subordinates Lateness Cases

Departments	Asking F	Asking %	Not Asking F	Not Asking %	Other Factors F	Other Factors %	Total F	Total %
1.Corporate Plann.	1	14.3	2	28.6	4	57.2	7	100
2.Financial Plann.	3	42.9	1	14.3	3	42.9	7	100
3.M.D.Secretariat	1	14.3	2	28.6	4	57.2	7	100
4.Data Processing	3	30.0	2	20.0	5	50.0	10	100
5.Administration	6	40.0	3	20.0	6	40.0	15	100
6.Material Acquis.	2	20.0	2	20.0	6	60.0	10	100
7.Flight Operation	6	30.0	4	20.0	10	50.0	20	100
8.Coordination	2	20.0	2	20.0	6	60.0	10	100
9.Finance	4	26.7	2	13.3	9	60.0	15	100
10.General Serv.	4	26.7	3	20.0	8	53.3	15	100
11.Marketing	2	10.5	5	26.3	12	63.2	19	100
12.Engineering	5	20.0	4	16.0	16	64.0	25	100
13.Customer Serv.	6	30.0	4	20.0	10	50.0	20	100
Total	45	25.0	36	20.6	99	54.4	180	100

9.3.1.5 Lateness Time Allowed By Superiors

When considering the lateness time for which the superiors ask a written explanation, the study has specified four categories. These are, 1 less than 30 minutes, 2. between 30-45 minutes, 3. between 45-60 minutes, and 4. more than one hour. Table 9.15 summarizes our findings.

Table 9.15: Lateness Time Allowed (n = 45)

Departments	Between 45-60 M F	%	More than One hour F	%	Total F	%
1.Corporate Plann.	-	-	1	100.0	1	100
2.Financial Plann.	1	33.3	2	66.7	3	100
3.M.D.Secretariat	-	-	1	11.0	1	100
4.Data Processing	1	33.3	2	66.7	3	100
5.Administration	3	42.9	4	57.1	7	100
6.Material Acquis.	1	50.0	1	50.0	2	100
7.Flight Operation	2	33.3	4	66.7	6	100
8.Coordination	-	-	2	100.0	2	100
9.Finance	2	50.0	2	50.0	4	100
10.General Services	1	25.0	3	75.0	4	100
11.Marketing	-	-	2	100.0	2	100
12.Engineering Maint.	3	75.0	1	25.0	4	100
13.Customer Services	2	33.3	4	66.7	6	100
Total	16	28.9	29	71.1	45	100

From Table 9.15, it could be noted that the majority of the superiors, 29 out of 45 (i.e. 71.1 %) ask for permission for a written explanation only when the subordinate is late for more than one hour, while 16 of them (i.e. 28.9 %) ask for a written explanation when the subordinate is late for a time between 45-60 minutes.

9.3.2 Communication

Four communication aspects has been considered, these are, 1. Means of communication concerning routine work, 2. Means of communication concerning non-routine work, 3. Responses of the top management in regard to routine work communication, and 4. Responses of the top management in regard to non-routine work communication. Following is a brief discussion of each of these communication aspects.

9.3.2.1 Means of Routine-Work Communication

In looking into the first communication aspect (which is the means of communication of routine work) the study has grouped the means of communication, normally deployed when contacting the top management, into three categories. These are: 1. by letters, 2. by telephones, 3. by other verbal means. Our findings are summarized in Table 9.16 below. It shows that the majority of respondents, 104 out of 180 (i.e. 53.2 %) use letters as means of communication, while 48 of them (i.e. 31 %) rely on the telephone. Only 28 of them (i.e. 15.8 %), however, stated that it is being done by other verbal means.

Table 9.16: Means of Routine Work Communication

Departments	Letters F	Letters %	Telephones F	Telephones %	Others F	Others %	Total F	Total %
1.Corporate Plann.	3	42.9	3	42.9	1	14.3	7	100
2.Financial Plann.	1	14.3	4	57.1	2	28.6	7	100
3.M.D.Secretariat	3	42.9	3	42.9	1	14.3	7	100
4.Data Processing	3	30.0	5	50.0	2	20.0	10	100
5.Administration	8	53.3	7	46.7	-	-	15	100
6.Material Acquis.	6	60.0	2	20.0	2	20.0	10	100
7.Flight Operation	9	45.0	5	25.0	6	30.0	20	100
8.Coordination	6	60.0	3	30.0	1	10.0	10	100
9.Finance	10	66.7	2	13.3	3	20.0	15	100
10.General Serv.	10	66.7	4	26.7	1	6.7	15	100
11.Marketing	12	63.2	5	26.3	2	10.0	19	100
12.Engineering	18	72.0	3	12.0	4	16.0	25	100
13.Customer Serv.	15	75.0	2	10.0	3	15.0	20	100
Total	104	53.2	48	31.0	28	15.8	180	100

9.3.2.2 Means of Non-Routine Work Communication

As for the communication of non-routine work, the study has devised three categories. These are: 1. by letters, 2. by telephones, by other verbal means. Table 9.17

summarizes our findings.

Table 9.17: Means of Non-Routine Work Communications

Departments	Letters F	Letters %	Telephones F	Telephones %	Others F	Others %	Total F	Total %
1.Corporate Plann.	2	28.6	3	42.9	2	28.6	7	100
2.Financial Plann.	1	14.3	3	42.9	3	42.9	7	100
3.M.D.Secrateriat	2	28.6	4	57.1	1	14.3	7	100
4.Data Processing	3	30.0	2	20.0	5	50.0	10	100
5.Administration	5	33.3	5	33.3	5	33.3	15	100
6.Material Acquis.	2	20.0	4	40.0	4	40.0	10	100
7.Flight Operation	3	15.0	9	45.0	8	40.0	20	100
8.Coordination	2	20.0	5	50.0	3	30.0	10	100
9.Finance	2	13.3	6	40.0	7	46.7	15	100
10.General Serv.	4	26.7	10	66.7	1	6.7	15	100
11.Marketing	5	26.3	11	57.9	3	15.8	19	100
12.Engineering	4	16.0	16	64.0	5	20.0	25	100
13.Customer Serv.	2	10.0	15	75.0	3	15.0	20	100
Total	37	21.7	93	48.8	50	29.5	180	100

The results of the survey as displayed in Table 9.17 shows that in their communication with the top management regarding the non-routine work, the majority of our respondents, 93 out of 180 (i.e. 48.8 %) relied on the use of telephones and 50 of them (i.e. 29.5 %) suggested that they used other verbal means. But only 37 of the respondents (i.e. 21.7 %) rely on letters in their communications with the top management regarding the non-routine work.

9.3.2.3 Responses of the Top Management for the Routine Work Communication

As for the responses of the top management for the routine work, the scurvy classified these responses into three categories, these are, 1. reasonable response, 2. unreasonable response, and, 3. uncertain. Table 9.18 shows our findings.

The purpose of this classification is to have an idea of the reaction of the key officials toward the communication system adopted between them and the top management in the organization in regard to the routine work, which gives an assessment of the system from the point of view of the senior officials, whether it is effective or not. Table 9.18 shows our findings. It could be deduced from this table that the majority of the responses, 111 out of 180 (i.e. 59 %) believe that the responses of the top management regarding the routine work is reasonable enough while 17 of them (i.e. 10.1 %) think that it is unreasonable. But 52 of them (i.e. 30.9 %), however, could not make up their minds.

Table 9.18: Responses of the Top Management to the Routine Work Communication

	Reasonable		Unreasonable		Uncertain		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	3	42.9	1	14.3	3	42.9	7	100
2.Financial Plann.	3	42.9	1	14.3	3	42.9	7	100
3.M.D.Secretariat	4	57.1	1	14.3	2	28.6	7	100
4.Data Processing	5	50.0	2	20.0	3	30.0	10	100
5.Administration	9	60.0	1	6.7	5	33.3	15	100
6.Material Acquis.	5	50.0	-	-	5	50.0	10	100
7.Flight Operation	13	65.0	4	20.0	3	15.0	20	100
8.Coordination	7	70.0	1	10.0	2	20.0	10	100
9.Finance	10	66.7	-	-	5	33.3	15	100
10.General Serv.	9	60.0	2	13.3	4	26.7	15	100
11.Marketing	11	57.9	2	10.5	6	31.6	19	100
12.Engineering	16	64.0	2	8.0	7	28.0	25	100
13.Customer Serv.	16	80.0	-	-	4	20.0	20	100
Total	111	59.0	17	10.1	52	30.9	180	100

9.3.2.4 Responses of the Top Management to the Non-Routine Work Communication

When focusing on the final aspect of communication (which is the responses of the top management to the non-routine work communication), the study has grouped the responses aspect into three categories, these are 1. reasonable response, 2. unreasonable response, and, 3. uncertain. Table 9.19 shows the findings of the study in this regard.

Table 9.19: Responses of the Top Management to the Non-Routine Work Communication

	Reasonable		Unreason-able		Uncertain		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	3	42.6	1	14.3	3	42.9	7	100
2.Financial Plann.	5	71.4	1	14.3	1	14.3	7	100
3.M.D.Secrateriat	3	42.6	2	28.6	2	28.6	7	100
4.Data Processing	4	40.0	2	20.0	4	40.0	10	100
5.Administration	9	60.0	4	26.7	2	13.3	15	100
6.Material Acquis.	6	60.0	2	20.0	2	20.0	10	100
7.Flight Operation	7	35.0	9	45.0	4	20.0	20	100
8.Coordination	4	40.0	3	30.0	3	30.0	10	100
9.Finance	6	40.0	2	13.3	7	46.7	15	100
10.General Serv.	6	40.0	6	40.0	3	20.0	15	100
11.Marketing	11	57.9	2	10.5	6	31.6	19	100
12.Engineering	16	64.0	3	12.0	6	24.0	25	100
13.Customer Serv.	15	75.0	3	15.0	2	10.0	20	100
Total	95	51.5	40	22.3	45	26.2	180	100

The result of the survey as demonstrated in Table 9.19 indicates that the majority of the respondents, 95 out 180 (i.e. 51.5 %) seem to be satisfied with the response of their top management regarding the non-routine work and think it is reasonable. While 40 of them (i.e. 22.3 %) think that the response is unreasonable, and, 45 of them (i.e. 26.2 %) did not have a clear out idea.

9.3.3 Coordination

In examining the coordination aspect, our survey emphasized the following: 1. type of relationship between sections, divisions, departments and their top managements. 2. the awareness of the activities practiced in other sections and other departments. Following is a brief discussion on our finding regarding those aspects.

9.3.3.1 Type of Relationship Between Sections, Divisions, Departments, and Their Top Management

To evaluate the type of the relationship between sections, divisions, departments, and their top management. Our study has specified four groups. These are: 1. always in touch with the top management, 2. only in touch with matters of extreme importance, 3. only when the section or the department is involved, 4. not in touch at all. Table 9.20 illustrates our findings.

Table 9.20: Type of Relationship Between Sections and Departments and Top Management

Departments	Always		Important		Involved		Total	
	F	%	F	%	F	%	F	%
1.Corporate Plann.	2	28.6	3	42.9	2	28.6	7	100
2.Financial Plann.	2	28.6	1	14.3	4	57.1	7	100
3.M.D.Secretariat	1	14.3	3	42.9	3	42.9	7	100
4.Data Processing	2	20.0	3	30.0	5	50.0	10	100
5.Administration	3	20.0	6	40.0	6	50.0	15	100
6.Material Acquis.	2	20.0	5	50.0	3	30.0	10	100
7.Flight Operation	3	15.0	10	50.0	7	35.0	20	100
8.Coordination	-	-	5	50.0	5	50.0	10	100
9.Finance	2	13.3	7	46.0	6	40.0	15	100
10.General Serv.	2	13.3	6	40.0	7	46.7	15	100
11.Marketing	1	5.3	10	52.6	8	42.1	19	100
12.Engineering	3	12.0	12	48.0	10	40.0	25	100
13.Customer Serv.	1	5.0	11	55.0	8	40.0	20	100
Total	24	15.0	82	43.2	74	41.8	180	100

Our survey shows that 82 out of 180 of the respondents (i.e. 43.2 %) seem to be in touch with the top management only with important matters, and 74 of them (i.e. 41.8 %) seem to contact the top management only when their section or department are involved, while, 24 of them (i.e. 15 %) seem to be always in touch with their top management.

9.3.3.2 The Awareness of Activities of Other Sections, Divisions, and Departments

The study specified two categories: first, awareness of all of them, and second, awareness of some of them. Table 9.21 below shows our findings.

Table 9.21: Awareness of Activities of Other Sections/Departments.

Departments	Aware of All F	%	Aware of Some F	%	Total F	%
1.Corporate Planning	4	57.2	3	42.9	7	100
2.Financial Planning	4	57.2	3	42.9	7	100
3.M.D.Secretariat	4	57.2	3	42.9	7	100
4.Data Processing	6	60.0	4	40.0	10	100
5.Administration	6	40.0	9	60.0	15	100
6.Material Acquis.	5	40.0	5	50.0	10	100
7.Flight Operation	10	50.0	10	50.0	20	100
8.Coordination	4	40.0	6	60.0	10	100
9.Finance	5	33.3	10	66.7	15	100
10.General Services	7	46.7	8	53.3	15	100
11.Marketing	6	31.6	13	68.4	19	100
12.Engineering Maint.	8	32.0	17	68.0	25	100
13.Customer Services	7	35.0	13	65.0	20	100
Total	76	45.4	104	54.6	180	100

Table 9.21 shows that the majority of the respondents, 104 out of 180 (i.e. 54.6 %) are aware of some of the activities that take place in other sections and departments, while 76 of them (i.e. 45.4 %) are aware of all of the activities of other sections and departments.

9.3.3.3 Time Spent on Coordination and Supervisory Tasks

In dealing with the time spent on coordination and supervisory tasks, our study has categorized it into four groups. These are: 1. Less than an hour, 2. Between 1-2 hours, 3. More than two hours, and, 4. Not every day. Table 9.22 summarizes our findings.

Table 9.22: Time Spent on Coordination and Supervisory Tasks.

Depts. No.	Less than one hour		Between 1-2 hours		More than two hours		Not every day		Total	
	F	%	F	%	F	%	F	%	F	%
1.	3	42.9	1	14.3	2	28.6	1	14.3	7	100
2.	1	14.3	1	14.3	3	42.9	2	28.6	7	100
3.	1	14.3	2	28.6	2	28.6	2	28.6	7	100
4.	3	30.0	1	10.0	4	40.0	2	20.0	10	100
5.	2	13.3	2	13.3	6	40.0	5	33.3	15	100
6.	2	20.0	1	10.0	5	50.0	2	20.0	10	100
7.	6	30.0	6	30.0	8	40.0	-	-	20	100
8.	3	30.0	1	10.0	6	60.0	-	-	10	100
9.	3	20.0	4	26.7	8	53.3	-	-	15	100
10.	-	-	4	26.7	11	73.3	-	-	15	100
11.	1	5.3	7	36.8	11	57.9	-	-	19	100
12.	3	12.0	8	32.0	14	56.0	-	-	25	100
13.	1	5.0	6	30.0	13	65.0	-	-	20	100
Total	29	18.2	44	21.8	93	48.9	14	11.1	180	100

It can be noticed from Table 9.22 above that there is a major variation in which most of the respondents, 93 out of 180 (i.e. 48.9 %) spend more than two hours in coordination and supervisory tasks; 44 of them (i.e. 21.8 %) spend between 1-2 hours on that tasks, 29 of them (i.e. 18.2 %) spend about less than one hour, while only 14 of them (i.e. 11.1 %) who do not do that tasks every day. What is also worth emphasizing here is that more time is spent on the coordination and supervisory tasks in large departments, while less time is required in smaller departments.

9.3.4 Decision Making

In examining the decision making aspect of the senior officials, the study has emphasized two aspects. These are, 1. Awareness of the subordinates work activities, and, 2. Awareness of the subordinate's problems. In the following we will present our findings regarding these aspects.

9.3.4.1 Awareness of the Subordinate's Work Activities

In treating the superior's awareness of the subordiunate's work activities the study has classified the awareness into three categories. These are: 1. Awareness of all of them, 2. Awareness of some of them, and, 3. Awareness of none at all. Table 9.23 displays our findings.

Table 9.23: Awareness of the Subordinates's Work Activities

Departments	Aware of all F	Aware of all %	Aware of some F	Aware of some %	Total F	Total %
1.Corporate Planning	2	28.6	5	71.4	7	100
2.Financial Planning	2	28.6	5	71.4	7	100
3.M.D.Secretariat	2	28.6	5	71.4	7	100
4.Data Processing	4	40.0	6	60.0	10	100
5.Administration	7	46.7	8	53.3	15	100
6.Material Acquis.	6	60.0	4	40.0	10	100
7.Flight Operation	11	55.0	9	45.0	20	100
8.Coordination	4	40.0	6	60.0	10	100
9.Finance	7	46.7	8	53.3	15	100
10.General Services	9	60.0	6	40.0	15	100
11.Marketing	11	57.9	8	42.1	19	100
12.Engineering Maint.	14	56.0	11	44.0	25	100
13.Customer Services	13	65.0	7	35.0	20	100
Total	92	47.2	88	52.8	180	100

The results of our findings shown in Table 9.23 show that 92 of the respondents (i.e. 47.2 %) are aware of all the activities of their subordinates, while 88 of them (i.e. 52.8 %) say they are aware of some work activities.

9.3.4.2 Awareness of the Subordinate's Problems

Our study examined the awareness of the subordinates problems as a decision making aspect. This aspect is specified in the survey into three categories. These are: 1 Awareness of all of them , 2. Awareness of some of them, and, 3. Awareness of none of them. Table 9.24 shows our findings.

Table 9.24: Awareness of Subordinates's Problems

	Aware of all		Aware of some		Total	
Departments	F	%	F	%	F	%
1.Corporate Plann.	5	71.4	2	28.6	7	100
2.Financial Plann.	5	71.4	2	28.6	7	100
3.M.D.Secretariat	4	57.5	3	42.9	7	100
4.Data Processing	7	70.0	3	30.0	10	100
5.Administration	8	53.3	7	46.7	15	100
6.Material Acquis.	5	50.0	5	50.0	10	100
7.Flight Operation	10	50.0	10	50.0	20	100
8.Coordination	6	60.0	4	40.0	10	100
9.Finance	8	53.3	7	46.7	15	100
10.General Serv.	4	26.7	11	73.3	15	100
11.Marketing	4	21.0	15	78.9	19	100
12.Engineering	8	32.0	17	68.0	25	100
13.Customer Serv.	6	30.0	14	70.0	20	100
Total	80	49.7	100	50.3	180	100

Table 9.24 above clearly indicates that the almost half

of the respondent say that they are aware of all problems facing their subordinates, while the rest of the respondents say that they are aware of some of these problems.

9.3.5 Management Perceptions

In examining the aspects of the management perceptions, our study has emphasized the following two aspects: 1. Management Perceptions in regard to the authorities available to the key officials, and, 2. Management perceptions for determining advancement in the organization. Following is a brief discussion of the findings in regard to these aspects.

9.3.5.1 Authority Available

in examining the of authority to the senior officials, the study has specified three categories, these are: 1. Having enough authority in order to accomplish the work properly, 2. Not having enough authority to accomplish the work properly, and 3. Uncertain. Our findings are summarized in Table 9.25 below, which shows that the majority of the key officials, 101 out of 180 (i.e. 50.7 %) think that they are having enough authority to accomplish their work properly, and 55 of them (i.e. 35.9 %) think that they are not having enough authority, but 24 of them (i.e. 13.4 %) are uncertain.

13.4 %) are uncertain.

Table 9.25: Authority Available

Departments	Enough F	Enough %	Not enough F	Not enough %	Uncertain F	Uncertain %	Total F	Total %
1.Corporate Plann.	1	14.3	5	71.4	1	14.3	7	100
2.Financial Plann.	3	42.9	2	28.6	2	28.6	7	100
3.M.D.Secretariat	2	28.6	4	57.1	1	14.3	7	100
4.Data Processing	3	30.0	7	70.0	-	-	10	100
5.Administration	7	46.7	6	40.0	2	13.3	15	100
6.Material Acquis.	4	40.0	3	30.0	3	30.0	10	100
7.Flight Operation	8	40.0	9	45.0	3	15.0	20	100
8.Coordination	5	50.0	5	45.0	-	-	10	100
9.Finance	10	66.0	4	50.0	1	6.7	15	100
10.General Serv.	13	86.7	1	26.7	1	6.7	15	100
11.Marketing	15	78.9	1	5.3	3	15.8	19	100
12.Engineering	15	60.0	5	20.0	5	20.0	25	100
13.Customer Serv.	15	75.0	3	15.0	2	10.0	20	100
Total	101	50.7	55	35.9	24	13.4	180	100

9.3.5.2 Management Perceptions for Determining Advancement in the Organization

AS for the second aspect of the management perceptions, our study has specified four categories concerning the most important factor which leads to the progress of an employee, these are: 1. Application of rules and regulations, 2. Personal initiatives, 3. Social influence, and , 4. Efficiency. Following is a brief discussion of each of these aspects.

9.3.5.2.1 Application of Rules and Regulations

To examine the first category of the management perceptions for determining advancement in the organization (which is the application of rules and regulations), our study specified five groups, these are, 1. very much agree, 2. agree 3. uncertain, 4. disagree, and, 5. very much disagree. Total 9.26 summarizes the findings. It shows that half of the key officials, agree that the application of rules and regulations leads to the progress of an employee. 61 of them (i.e. 34.7 %) very much agree, 24 of them (i.e. 13 %) disagree with that, while 5 of the respondents are uncertain.

Table 9.26: Application Of Rules and Regulations

	V.agree		Agree		Uncert-ain		Disagree		Total	
Departments	F	%	F	%	F	%	F	%	F	%
1.Corporate Plann.	5	71.4	2	28.6	-	-	-	-	7	100
2.Financial Plann.	3	42.9	3	42.9	-	-	1	14.3	7	100
3.M.D.Secretariat	2	28.6	3	42.9	1	14.3	1	14.3	7	100
4.Data Processing	2	20.0	5	50.0	1	10.0	2	20.0	10	100
5.Administration	6	40.0	8	53.3	-	-	1	6.7	15	100
6.Material Acquis.	1	10.0	5	50.0	2	20.0	2	20.0	10	100
7.Flight Operation	9	45.0	9	45.0	-	-	2	10.0	20	100
8.Coordination	4	40.0	6	50.0	-	-	-	-	10	100
9.Finance	5	33.3	7	46.7	1	6.7	2	13.3	15	100
10.General Serv.	4	26.7	6	40.0	-	-	5	33.3	15	100
11.Marketing	7	36.8	9	47.4	-	-	3	15.8	19	100
12.Engineering	9	36.0	13	52.0	-	-	3	12.0	25	100
13.Customer Serv.	4	20.0	14	70.0	-	-	2	10.0	20	100
Total	61	34.7	90	48.4	5	3.9	24	13.0	180	100

9.3.5.2.2 Personal Initiatives

Concerning the second category of the management perceptions of the advancement in the organization (which is the personal initiatives), Table 9.27 below displays our findings.

Table 9.27: Personal Initiatives

	V.agree		Agree		Total	
Departments	F	%	F	%	F	%
1.Corporate Planning	4	57.1	3	42.9	7	100
2.Financial Planning	5	71.4	2	28.6	7	100
3.M.D.Secretariat	4	57.1	3	42.9	7	100
4.Data Processing	4	40.0	6	60.0	10	100
5.Administration	6	40.0	9	60.0	15	100
6.Material Acquisition	4	40.0	6	60.0	10	100
7.Flight Operation	12	60.0	8	60.0	20	100
8.Coordination	5	50.0	5	50.0	10	100
9.Finance	7	46.7	8	53.3	15	100
10.General Services	7	46.7	8	53.3	15	100
11.Marketing	10	52.6	9	47.4	19	100
12.Engineering Maint.	11	44.0	14	56.0	25	100
13.Customer Services	9	45.0	11	55.0	20	100
Total	88	48.9	92	51.1	180	100

Table 9.27 shows that 92 out of 180 of the senior officials (i.e. 51.1 %) agree that the personal initiatives is the most factor which leads to the progress of an employee, while 88 of them (i.e. 48.9 %) very much agree.

9.3.5.2.3 Social Influence

Examining the third category of the management perceptions of the advancement in the organization (social influence), our findings are displayed in Table 9.28 below.

Table 9.28: Social Influence

	V.agree		Agree		Uncert-tain		Disagree		Total	
Departments	F	%	F	%	F	%	F	%	F	%
1.Corporate Plann	3	42.9	2	28.6	-	-	2	28.6	7	100
2.Financial Plann	2	28.6	2	28.6	-	-	3	47.9	7	100
3.M.D.Secretariat	3	42.9	2	28.6	1	14.3	1	14.3	7	100
4.Data Processing	2	20.0	5	50.0	2	20.0	1	10.0	10	100
5.Administration	4	26.7	6	40.0	2	13.3	3	20.0	15	100
6.Material Acquis	4	40.0	4	40.0	2	20.0	-	-	10	100
7.Flight Operation	7	35.0	7	35.0	4	20.0	2	10.0	20	100
8.Coordination	1	10.0	5	50.0	3	30.0	1	10.0	10	100
9.Finance	6	40.0	4	26.7	2	13.3	3	20.0	15	100
10.General Serv.	8	53.0	2	13.3	3	20.0	2	13.3	15	100
11.Marketing	7	36.8	8	42.1	3	15.8	1	5.3	19	100
12.Engineering	6	24.0	7	28.0	7	28.0	5	20.0	25	100
13.Customer Serv.	7	35.0	6	30.0	4	20.0	3	15.0	20	100
Total	60	33.5	60	33.9	33	16.5	27	16.1	180	100

From Table 9.28, the majority of the key officials, 120 out of 180 (i.e. 67.4 %) agree that the social influence is important factor which leads to the progress of an employee, 27 of them (i.e. 16.1 %) disagree with that, while 33 of them (i.e. 16.5 %) are uncertain.

9.3.5.2.4 Efficiency

Finally, to examine whether efficiency is the most factor leads to the progress of an employee, our findings are in Table 9.29 below.

Table 9.29: Efficiency

Departments	V.agree F	V.agree %	Agree F	Agree %	Uncertain F	Uncertain %	Total F	Total %
1.Corporate Planning	4	57.1	3	42.9	-	-	7	100
2.Financial Planning	2	28.6	3	42.9	2	28.6	7	100
3.M.D.Secretariat	4	57.1	3	42.9	-	-	7	100
4.Data Processing	4	40.0	5	50.0	1	10.0	10	100
5.Administration	6	40.0	9	60.0	-	-	15	100
6.Material Acquis.	4	40.0	4	40.0	2	20.0	10	100
7.Flight Operation	11	55.0	9	45.0	-	-	20	100
8.Coordination	7	70.0	3	30.0	-	-	10	100
9.Finance	6	40.0	8	53.3	1	6.7	15	100
10.General Serv.	8	53.3	6	40.0	1	6.7	15	100
11.Marketing	6	31.6	12	63.2	1	6.7	19	100
12.Engineering	8	32.0	15	60.0	2	8.0	25	100
13.Customer Serv.	10	50.0	10	50.0	-	-	20	100
Total	80	45.7	90	47.7	10	6.6	180	100

Table 9.29 shows that the majority of the key officials, 90 out of the 180 (i.e. 47.7 %) agree that efficiency is important factor which leads to the progress of an employee, and 80 of them (i.e. 45.7 %) very much agree in that, but only 10 of them (i.e. 6.6 %) have no idea.

9.4 Association Between Size and Organizational Culture

In examining the association between size and the organizational culture, we will concentrate on the following association, these are, 1. between size and control, 2. between size and communication, 3. between size and coordination, 4, between size and decision making, and, 5. between size and management perceptions. Following is a brief discussion on each of these associations.

9.4.1 Association Between Size and Control

Regarding the association between size and control aspects in the thirteen departments, we will focus on the association between size and each of the following aspects, 1. the relationship between the superior and the subordinates, 2. ways in which the subordinates apply for permission to leave the work place, 3. the superior's responses to the subordinates application to leave the work place, 4. the superior's responses to the lateness of the subordinates, and 5. lateness time allowed by superiors. Table 9.30 shows that there is no significant association between size and the superiors-subordinates relationships, chi-square was found to be insignificant at any level, which means that the null hypothesis (there is no difference) is accepted.

As for the association between size and ways of applying for permission to leave the work place, Table 9.30 shows that there is no significant association between them, chi-square was found to be insignificant at any level, and the null hypothesis is accepted. The results of our survey also indicate that there is a significant association between size and the responses of the superiors for application for permission to leave the work place, (X^2 = 12.083, P = 0.02).

Table 9.30: Association Between Size and Control

Control Aspects	X^2	D.F.	P
1. Relationship between superiors and subordinates	---	---	---
2. Ways of applying for permissions	---	---	---
3. Response of the superiors for application for permission	12.083	4	0.02
4. Responses of the superiors for the lateness cases	11.681	4	0.01
5. Lateness case's time allowed	7.188	2	0.02

That means that the null hypothesis is rejected and there are differences concerning this aspect in the thirteen departments. As for the association between size and the responses of the superiors for the lateness cases, our findings shown in Table 9.30 indicate that there is a significant association between them (X^2 = 11.681, P = 0.01) which means that there are differences in the departments (small, medium, and large) regarding this control aspect. Finally, Table 9.30 indicates that there is a significant association between size and the lateness time allowed, (X^2 = 7.188, P = 0.02) which means that the null hypothesis is rejected and that indicates a significant differences in the departments concerning this control aspect.

9.4.2 Association Between Size and Communication

In examining the association between size and communication, we will concentrate on the association between size and the following communication aspects, these are, 1. Means of routine work communications, 2. Means of non-routine work communications, 3. Responses of the top management for the routine work communications, and, 4. Responses of the top management to the non-routine work communications. Following is a brief discussion on these associations which is shown in Table 9.31 below.

Table 9.31: Association Between Size and Communication

Communication Aspects	X^2	D.F.	P
1. Means of routine work Communication	17.283	4	0.001
2. Means of non-routine work communication	15.847	4	0.003
3. Response of the top management for the routine work communication	---	---	---
4. Response of the top management for the non routine work communication	---	---	---

Table 9.31 shows that there is a significant association between size and means of routine work communication, (X^2 = 17.283, P = 0.001) that means the null hypothesis (there is no difference) is rejected and indicated that there are significant differences among the departments (small, medium, and large) in regard to this particular communicational aspect. Our findings also show that there is a significant association between size and the means of non-routine work communication, (X^2 = 15.847, P = 0.0003) which means that there are differences in the departments concerning this aspect of communication. As for the association between size and

the responses of the top management for the routine work communication, and the responses of the top management for the non-routine work communication, our findings suggest that there are no significant association between them, chi-square were found to be insignificant at any level and the null hypothesis is accepted (there is no difference) that means there are no differences between size and each of them among the departments.

9.4.3 Association Between Size and Coordination

In investigating the association between size and coordination, we have concentrated on the association between size and the following two coordination aspects, these are; 1. Type of relationship between sections, divisions, and departments with their top management, and, 2. The awareness of activities of other sections, divisions, and departments, 3. Time spent on coordination and supervisory tasks. Our analyses suggest that there is no significant association between size and each of the first two aspects of coordination , chi-squares were found to be insignificant at any level, that means, the null hypothesis is accepted and indicates that there are no differences in the departments in regard to those aspects. As for the third aspect which is (time spent on coordination and supervisory tasks), our findings show that it has a significant association with size, (X^2 = 42.831, p = 0.000 at 6 degrees of freedom), that means there are differences among the departments in regard to this aspect.

9.4.4 Association Between Size and Decision Making

In examining the association between size and decision making, we have emphasized the association between size and each of the following two aspects of the decision making, these are; 1. awareness of the subordinate's work activities, and 2. awareness of the subordinate's problems. Following is a brief discussion on these associations which is shown in Table 9.32 below.

Table 9.32: Association Between Size and Decision Making

Decision Making Aspects	X^2	D.F.	P
1. Awareness of work activities	10.910	2	0.005
2. Awareness of work problems	16.785	2	0.0002

Table 9.32 shows that there is a significant association between size and the awareness of the subordinates work activities, (X^2 = 10.910, P = 0.005), that means the null hypothesis is rejected (there is no difference) which indicates that there are differences among the departments in regard to this aspect. Our

findings also shows that there is a significant association between size and awareness of the subordinates problems, (X^2 = 16.785, P = 0.0002), that means the null hypothesis is rejected (there is no difference) which indicates that there are differences among the departments (small, medium, large) in regard to this aspect.

9.4.5 Association Between Size and Management Perceptions

Two of the management perceptions were concentrated on in analyzing the association with size, these are; 1. authority available, and 2. management perception for determining advancement in the organization (which include, application of rules and regulations, personal initiatives, social influence, and efficiency). Following is a brief discussion of these associations which is shown in Table 9.33. It shows that there is a significant association between size and management perception in regard to the authority available, (X^2 = 24.832, P = 0.0001), in which the null hypothesis is rejected (there is no difference), that means there are differences in the departments in connection to this aspect. As for the association between size and the application of rules and regulations as one of the management perceptions in determining the advancement in the organization,

Table 9.33: Association Between Size and Management Perceptions

Management Perceptions Aspects	X^2	D.F.	P
1. Authority available	24.832	4	0.0001
2. Advancement in the organization			
a. Application of rules & regulations	19.105	6	0.005
b. Personal initiatives	---	---	---
c. Social influence	14.967	6	0.05
d. Efficiency	---	---	---

our findings indicates that there is a significant association between them, (X^2 = 19.105, P = 0.005) which means that there are differences in the departments in regard to this aspect. Our findings also indicates that there is a significant association between size and social influence, (X^2 = 14.967, P = 0.05), which means that there are differences in the departments (small, medium, and large) in regard to this aspect. For the association between size and personal influence and between size and efficiency, our findings indicates that there are no significant association among them, chi-squares were found to be insignificant at any levels, that means there are no differences among the departments concerning these two aspects.

9.5 Summary

This chapter has been devoted to examine the qualitative aspects of size of PIA's departments and the organizational culture of PIA, and finally to examine the relationship between the size of departments and its organizational culture.

In regard to the qualitative aspects of size of the departments, two issues has been employed, these are, the non-work related attributes (which include, age, sex, marital status, place of birth, qualification, and previous employment), and work-related attributes (which include, seniority, training, training period, and training relation to work activities).

Regarding the first issue (which is the non work related attributes), our findings indicates that the majority of the respondents are in the age of less that 45 years old, and the respondents in the smaller departments are in the age group between 30-39 years. The majority of the respondents are male and the female respondents are concentrated in the departments of administration, marketing and finance. The majority of the respondents are originally from towns and the study indicates that higher qualification is found in the large departments and about 41 % of them are having bachelor's degrees. Our findings indicate that the majority of the respondents have atleast one previous employment, and more employees with previous employment have been found in large departments than in smaller ones. As far as the second issue of the qualitative aspect of size (which is the work-related attributes) is concerned, our findings indicate that the majority of our respondents have between 5-10 years of service in the organization, and the employees in the smaller departments have served more in the organization than in the large departments. The study also indicates that the majority of the respondents did not have any training when they joined the organization, and the departments whose activities are technical usually have training for their employees, it is also found that there were no training for the employees in the small departments.

As far as the PIA's organizational culture is concerned, the study has emphasized five of its aspects, these are, control, communication, coordination, decision making, and management perceptions. Regarding the control aspect, our findings indicate that the majority of the respondents (senior officials) have good relationships with their subordinates, and they expect them to verbally ask for permission to leave the work place, and half of the respondents grant the subordinates permission to leave the work place by keeping a note in the subordinates files, while the others are either grant the permission by considering their local leaves or grant the permission without considering their local leave. The majority of the senior officials prefer considering other factors in dealing with the lateness cases. For the communication aspect, our findings suggest that the majority of the respondents use letters as means of routine work communication, while the majority of the senior officials relied on the use of telephone as means of non routine work communication. The majority of the senior officials believe that the responses of the top management regarding the routine and the non routine work are reasonable enough. About 43 % of the senior officials seem to be in touch with the top management only with important matters, and about 42 % of them seem to contact the top management only when their section or department are involved, while 15 % seem to be always in touch with their top management. Regarding the awareness of activities of other sections and departments, our findings indicate that the majority of the senior officials are aware of some of the activities that take place in other sections and departments. The study suggests that the majority of the senior officials think that they are having enough authority to accomplish their work properly, and they agree that the application of rules and regulations leads to the progress of an employee and all of the senior officials agree that the personal initiatives are the most factor which leads to the progress of an employee. The majority of the respondents agree that the social influence is important factor which leads to the progress of an employee, while 94 % of them think that efficiency is important factor which leads to the progress of an employee.

In analyzing the association between size and organizational culture, the associations found by the study are as follows:

1. There is association between size and the response of the superiors for application for permission to leave the work place.

2. There is association between size and the response of the superiors for the lateness cases.

3. There is association between size and the lateness case's time allowed.

4. There is association between size and means of routine work communication.

5. There is association between size and means of non-routine work communication.

6. There is association between size and awareness of work activities.

7. There is association between size and awareness of work problems.

8. There is association between size and authority available to the senior officials as a management perception on the authority available.

9. There is association between size and application of rules and regulations as a management perceptions for determining advancement in the organization.

10. There is association between size and social influence as a management perception for determining advancement in the organization.

It can be argued that the organizational culture (which include, control, communication, coordination, decisions making, and, management perceptions) are highly and significantly associated with the size of the departments. That indicates, the nature of the aspects of the organizational culture differ from the departments which have larger size than in the departments which have smaller.

Chapter Ten

Behavioural and Cultural Relationships

10.1 Introduction

This Chapter aims at investigating in some details the attitudes and the behaviour of the PIA's employees, and to establish a relationships between them, and between each of them as well as between size and organizational culture.

In examining the attitudinal aspects of the PIA's employees, this study will concentrate on three issues, these are; 1. Job attitudes,(which include, source of motivation, job satisfaction, and, job rotation). 2. Co-workers relationships, (which include, number of co-workers, number of close friends, and, frequency of meeting close friends outside the work place). In analyzing the behavioural aspects of PIA's employees, the study will emphasize the following aspects. These are; 1. Absenteeism, (which include, absenteeism with and without permission), 2. Tardiness, and, 3. Responsibility Preference (employee's view toward their responsibilities).

Finally, we will find out the association (if any) by utilizing the chi-square technique between the attitudinal and behavioural aspects of employees, and between the attitudes and the behaviour with both size and the organizational culture.

10.2 Attitudes of PIA's Employees

This study concentrated on three attitudinal issues, these are: 1. job attitudes, 2. Co-workers relationships, 3. Supervisory relationships. Following is a brief discussion of each of them.

10.2.1. Job Attitudes

In examining the job attitudes of the employees, this study focused on three aspects. These are, 1. the source of motivation, 2. job satisfaction, and 3. job rotation. In the following we will explain in some detailes our findings regarding those aspects.

10.2.1.1 Sources of Motivation

The study has tested the sources of motivation to examine the appeals factors while joining this organization. The source of motivation has been specified into four categories. These are: 1. salary, 2. security, 3. working conditions, and 4. appropriate job. Table 10.1 shows our findings, which indicates that 172 of the respondents (i.e. 61.9 %) have joined the organization because they expect a higher salary than in other organizations, 67 of them (i.e. 24.1 %) have joined the organization because of the working conditions, 24 of them (i.e. 8.6 %) have joined the organization because they think that it is the appropriate job according to their specialization, and 15 of them (i.e. 5.4 %) think that they joined PIA because it is more secured than other jobs.

Table 10.1: Appeal Factors

Depts. No.	Salary		Security		Working conditions		Appropriate		Total	
	F	%	F	%	F	%	F	%	F	%
1.	4	100.0	-	-	-	-	-	-	4	100
2.	2	50.0	-	-	2	50.0	-	-	4	100
3.	3	75.0	-	-	1	25.0	-	-	4	100
4.	5	62.5	-	-	-	-	3	37.5	8	100
5.	15	65.2	2	8.7	3	13.0	3	13.0	23	100
6.	11	47.8	1	4.3	10	43.5	1	4.3	23	100
7.	10	76.9	-	-	3	23.1	-	-	13	100
8.	16	64.0	1	4.0	5	20.0	3	12.0	25	100
9.	15	62.5	1	4.2	5	20.8	3	12.5	24	100
10.	21	60.0	2	5.7	10	28.6	2	5.7	35	100
11.	22	62.9	1	2.9	6	17.1	6	17.1	35	100
12.	23	57.5	3	7.5	13	32.5	1	2.5	40	100
13.	25	62.5	4	10.0	9	22.5	2	5.0	40	100
Total	172	61.9	15	5.4	67	24.1	24	8.6	278	100

10.2.1.2 Job Satisfaction

The study has categorized this aspect into five groups in order to evaluate their jobs and satisfaction, these are, 1. very much satisfied, 2. satisfied, 3. uncertain 4. unsatisfied, and, 5. very much unsatisfied. Table 10.2 below summarizes our findings.

Table 10.2: Job Satisfaction

Depts. No.	V.much satisfied		Satisfied		Disatisfied		V.much Disatisfied		Total	
	F	%	F	%	F	%	F	%	F	%
1.	-	-	4	100.0	-	-	-	-	4	100
2.	-	-	4	100.0	-	-	-	-	4	100
3.	-	-	4	100.0	-	-	-	-	4	100
4.	1	12.5	5	62.5	2	25.5	-	-	8	100
5.	2	8.7	11	47.8	5	21.7	5	21.7	23	100
6.	1	4.3	13	56.5	5	21.7	4	17.4	23	100
7.	-	-	10	76.9	3	23.1	-	-	13	100
8.	5	20.0	15	60.0	4	16.0	1	4.0	25	100
9.	2	8.3	14	58.3	5	20.8	3	12.5	24	100
10.	7	20.0	23	65.7	3	8.6	2	5.7	35	100
11.	9	25.7	16	45.7	7	20.0	3	8.6	35	100
12.	12	30.0	25	62.5	3	7.5	-	-	40	100
13.	10	25.0	18	45.0	7	17.5	5	12.5	40	100
Total	49	17.6	162	58.3	44	15.8	23	8.3	278	100

Table 10.2 shows that 162 of the respondents (i.e. 58.3 %) are satisfied with their jobs, 49 of them (i.e. 17.6 %) are very much satisfied, while 44 of them (i.e. 15.8

%) are not satisfied and 23 of them (i.e. 8.3 %) are very much not satisfied.

10.2.1.3 Job Rotation

This aspect is attempted to examine : a. whether the respondents are willing to change their jobs or not. b. would they prefer to change their jobs to other departments or some where outside the organization. Table 10.3 shows our findings regarding to whether the respondents are willing to change their jobs or not.

Table 10.3: Changing Jobs

	Yes		No		Total	
Departments	F	%	F	%	F	%
1.Corporate Plann.	1	25.0	3	75.0	4	100
2.Financial Plann.	-	-	4	100.0	4	100
3.M.D.Secretariat	-	-	4	100.0	4	100
4.Data Processing	2	25.0	6	75.0	8	100
5.Administration	10	43.5	13	56.5	23	100
6.Material Acquis.	9	39.1	14	60.9	23	100
7.Flight Operation	3	23.1	10	76.9	13	100
8.Coordination	5	20.0	20	80.0	25	100
9.Finance	8	33.3	16	66.7	24	100
10.General Serv.	5	14.3	30	85.7	35	100
11.Marketing	12	34.3	23	65.7	35	100
12.Engineering	9	22.5	31	77.5	40	100
13.Customer Serv.	17	42.5	23	57.5	40	100
Total	81	29.1	197	70.9	278	100

Table 10.3 shows that the majority of the respondents, 197 (i.e. 70.9 %) do not prefer to change their jobs, while 81 of the respondents (i.e. 29.1 %) prefer to change their jobs. Table 10.4 below shows the propensity to change jobs in or out of PIA.

Table 10.4: Propensity to Change Job in or out of PIA

DEpartments	In		Out		Total	
	F	%	F	%	F	%
1.Corporate Plann.	1	100.0	-	-	1	100
4.Data Processing	2	100.0	-	-	2	100
5.Administration	3	30.0	7	70.0	10	100
6.Material Acquis.	1	11.1	8	88.9	9	100
7.Flight Operation	-	-	3	100.0	3	100
8.Coordination	2	40.0	3	60.0	5	100
9.Finance	5	62.5	3	37.5	8	100
10.General Serv.	3	60.0	2	40.0	5	100
11.Marketing	11	91.7	1	8.3	12	100
12.Engineering	8	88.9	1	11.1	9	100
13.Customer Serv.	12	70.6	5	29.4	17	100
Total	48	59.3	33	40.7	81	100

Table 10.4 indicated that 48 of the respondents (i.e. 59.3 %) prefer to change their jobs to other departments, while 33 of them (i.e. 40.7 %) prefer to change their jobs to other organizations.

10.2.2 Co-workers Relationships

The study has tested the co-workers relationships to examine the attitudes of the employees toward their colleagues. The study has examined this aspect through three indicators, these are, 1. number of co-workers, 2. number of close friends among them, and, 3. frequency of meeting them outside the work place. Following is a brief discussion of our findings in regard to these indicators.

10.2.2.1 Number of Co-workers

The study has categorized this aspect into four groups, these are, 1. less than 10, 2. between 10-20, 3. between 21-40, and, 4. above 40. Table 10.5 below shows our findings.

Table 10.5: Number of Co-workers

Depts. No.	Less than 10		Between 10-20		Between 21-40		Above 40		Total	
	F	%	F	%	F	%	F	%	F	%
1.	4	100.0	-	-	-	-	-	-	4	100
2.	-	-	3	75.0	1	25.0	-	-	4	100
3.	2	50.0	2	50.0	-	-	-	-	4	100
4.	-	-	4	50.0	4	50.0	-	-	8	100
5.	-	-	9	39.1	9	39.1	5	21.8	23	100
6.	-	-	6	26.1	10	43.5	7	30.4	23	100
7.	2	15.4	6	46.2	5	38.4	-	-	13	100
8.	3	12.0	9	36.0	7	28.0	6	24.0	25	100
9.	-	-	6	25.0	11	45.8	7	29.2	24	100
10.	3	8.6	6	17.1	8	22.9	18	51.4	35	100
11.	-	-	4	11.4	8	22.8	23	65.7	35	100
12.	-	-	3	7.5	13	32.5	24	60.0	40	100
13.	-	-	7	17.5	13	32.5	20	50.0	40	100
Total	14	5.0	65	23.4	89	32.0	110	39.6	278	100

Table 10.5 shows that 110 of the respondents (i.e. 39.6 %) have co-workers more than 40, 89 of them (i.e. 32.0 %) have between 10-20 co-workers, and 14 of the respondents (i.e. 5 %) have less than 10 co-workers.

10.2.2.2 Number of Close Friends

This aspect has been categorized into four groups, these are, 1. none, 2. between 1-4, 3. between 5-10, and 4. above 10. Table 10.6 below shows our findings.

Table 10.6: Number of Close Friends

Depts No.	None		Between 1-4		Between 5-10		Above 10		Total	
	F	%	F	%	F	%	F	%	F	%
1.	-	-	4	100.0	-	-	-	-	4	100
2.	-	-	2	50.0	2	50.0	-	-	4	100
3.	-	-	3	75.0	1	25.0	-	-	4	100
4.	1	12.5	4	50.0	3	37.5	-	-	8	100
5.	2	8.7	9	39.1	7	30.4	5	21.8	23	100
6.	3	13.0	9	39.1	6	26.1	5	21.8	23	100
7.	3	23.1	1	7.7	6	46.2	3	23.0	13	100
8.	6	24.0	7	28.0	8	32.0	4	16.0	25	100
9.	14	58.3	6	25.0	4	16.7	-	-	24	100
10.	6	17.1	14	40.0	5	14.3	10	28.6	35	100
11.	4	11.4	9	25.7	10	28.6	12	34.3	35	100
12.	2	5.0	9	22.5	15	37.5	14	35.0	40	100
13.	4	10.0	7	17.5	14	35.0	15	37.5	40	100
Total	45	16.2	84	30.2	81	29.1	68	24.5	278	100

Table 10.6 shows that 84 of the respondents (i.e. 30.2 %) have between 1-4 close friends, 81 of them (i.e. 29.1 %) have between 5-10 close friends, 68 of them (i.e. 24.5 %) have more than 10 close friends, and 45 of them (i.e. 16.2 %) do not have any.

10.2.2.3 Frequency of Meeting Friends Outside the Work-Place

The study has categorized the frequency of meeting friends outside the work-place into four groups, these are, 1. regularly, 2. sometimes, 3. rarely, and, 4. never. Table 10.7 shows our findings.

Table 10.7: Frequency of Meeting Friends

Depts.	Regularily		Sometimes		Rearly		Never		Total	
No.	F	%	F	%	F	%	F	%	F	%
1.	-	-	2	50.0	2	50.0	-	-	4	100
2.	-	-	2	50.0	1	25.0	1	25.0	4	100
3.	1	25.0	2	50.0	1	25.0	-	-	4	100
4.	1	12.5	4	50.0	1	12.5	2	25.0	8	100
5.	3	13.0	6	26.1	12	52.2	2	8.7	23	100
6.	5	21.7	10	43.5	6	26.1	2	8.7	23	100
7.	5	38.5	4	30.8	3	23.1	1	7.6	13	100
8.	5	20.0	8	32.0	7	28.0	5	20.0	25	100
9.	7	29.2	8	33.3	6	25.0	3	12.5	24	100
10.	9	25.7	8	22.9	9	25.7	9	25.7	35	100
11.	5	14.3	9	25.7	11	31.4	10	28.6	35	100
12.	6	15.0	12	30.0	9	22.5	13	32.5	40	100
13.	7	17.5	11	27.5	12	30.0	10	25.0	40	100
Total	54	19.4	86	30.9	80	28.8	58	20.9	278	100

Table 10.7 shows that 86 of the respondents (i.e. 30.9 %) meet with their close friends sometimes outside the work-place, 80 of them (i.e. 28.8 %) rarely meet with their close friends, 58 of the respondents (i.e. 20.9 %) never meet with their close friends outside the work-place, and 54 of them (i.e. 19.4 %) regularily meet their close friends outside the work-place.

10.2.3 Supervisory Relationships

The study has attempted to examine this aspect in order to assess the nature of the relationships between superiors and the subordinates from the subordinate's view points. The study has specified two aspects of supervisory relationships, these are, 1. nature of the relationships between subordinates and superiors, 2. superiors priorities at work. Following is a brief discussion of each one of them.

10.2.3.1 Nature of the Relationships Between Subordinates and Superiors

This study has categorized the nature of the relationships between subordinates and superiors into five groups, these are, 1. very good, 2. good, 3. uncertain, 4. satisfactory, 5. not good. Table 10.8 below shows our findings, which indicates that the majority of the respondents of 164 employees (i.e. 59 %) think that their relationships with their superiors are satisfactory, 89 of respondents (i.e. 32 %) think that their relationships with their superiors are good, and 25 of them (i.e. 9 %) said that their relationships with their superiors are very good.

Table 10.8: Superiors Relationships

	V.Good		Good		Satisfact-ory		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	-	-	2	50.0	2	50.0	4	100
2.Financial Plann.	2	50.0	-	-	2	50.0	4	100
3.M.D.Secretariat	-	-	2	50.0	2	50.0	4	100
4.Data Processing	-	-	1	12.5	7	87.5	8	100
5.Administration	2	8.7	6	26.1	15	65.2	23	100
6.Material Acquis.	2	8.7	11	47.8	10	43.5	23	100
7.Flight Operation	2	15.4	3	23.1	8	61.5	13	100
8.Coordination	1	4.0	13	52.0	11	44.0	25	100
9.Finance	3	12.5	5	20.8	16	66.7	24	100
10.General Serv.	2	5.7	14	40.0	19	54.3	35	100
11.Marketing	3	8.6	9	25.7	23	65.7	35	100
12.Engineering	4	10.0	11	27.5	25	62.5	40	100
13.Customer Serv.	4	10.0	12	30.0	24	60.0	40	100
Total	25	9.0	89	32.0	164	59.0	278	100

It is worth mentioning here that none of the respondents said that their relationships with their superiors are not good.

10.2.3.2 Superior's Priorities at Work

This aspect has been categorized in this study into four groups, these are, 1. getting work done, 2. putting rules and regulations in force, 3. personal initiatives, 4. efficiency. In the following we will discuss our findings in regard to these aspects in some details.

10.2.3.2.1 Getting Work Done

This aspect is specified in this study into five groups, these are, 1. very much agree, 2. agree, 3. uncertain, 4. disagree, and, 5. very much disagree. Table 10.9 below summarizes our findings.

Table 10.9: Getting Work Done

Departments	V.Good F	%	Good F	%	Uncertain F	%	Total F	%
1.Corporate Plann.	-	-	3	75.0	1	25.0	4	100
2.Financial Plann.	-	-	2	50.0	2	50.0	4	100
3.M.D.Secratariat	1	25.0	2	50.0	1	25.0	4	100
4.Data Processing	6	75.0	2	25.0	-	-	8	100
5.Administration	10	43.5	13	56.5	-	-	23	100
6.Material Acquis.	13	56.5	10	43.5	-	-	23	100
7.Flight Operation	7	53.8	6	46.2	-	-	13	100
8.Coordination	13	52.0	12	48.0	-	-	25	100
9.Finance	13	54.2	11	45.8	-	-	24	100
10.General Serv.	16	45.7	16	45.7	3	8.6	35	100
11.Marketing	17	48.6	13	37.1	5	14.3	35	100
12.Engineering	21	52.5	16	40.0	3	7.5	40	100
13.Customer Serv.	17	42.5	18	45.0	5	12.5	40	100
Total	134	48.2	124	44.6	20	7.2	278	100

Table 10.19 indicates that 134 of the respondents (i.e. 48.2 %) think that they are very much agree with "getting work done" as a priority to their superiors, 124 of the respondents (i.e. 44.6 %) think they agree, while only 20 of them (i.e. 7.2 %) do not know. That means the majority of the respondents 258 out of 278 which constitute 92.8 % agree with "getting work done" as a priority of their superiors.

10.2.3.2.2 Putting Rules and Regulations in Force.

The study has categorized this aspect into five groups, these are, 1. very much agree, 2. agree, 3. uncertain, 4. disagree, and, 5. very much disagree. Table 10.10 below shows our findings

Table 10.10: Application of Rules and Regulations

	Agree		Uncertain		Disagree		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	3	75.0	1	25.0	-	-	4	100
2.Financial Plann.	1	25.0	1	25.0	2	50.0	4	100
3.M.D.Secrateriat	3	75.0	1	25.0	-	-	4	100
4.Data Processing	3	37.5	2	25.0	3	37.5	8	100
5.Administration	5	21.7	15	65.2	3	13.0	23	100
6.Material Acquis.	-	-	11	67.8	12	52.2	23	100
7.Flight Operation	-	-	8	61.5	5	38.5	13	100
8.Coordination	1	4.0	15	60.0	9	36.0	25	100
9.Finance	4	16.7	12	50.0	8	33.3	24	100
10.General Serv.	2	5.7	19	54.3	14	40.0	35	100
11.Marketing	2	5.7	18	51.4	15	42.9	35	100
12.Engineering	6	30.0	23	57.5	11	27.5	40	100
13.Customer Serv.	12	30.0	17	42.5	11	27.5	40	100
Total	42	15.1	143	51.4	93	33.5	278	100

Table 10.10 shows that 143 of the respondents (i.e. 51.4 %) do not know whether the implementation of rules and regulations is one of the superiors priorities at work. 93 of them (i.e. 33.5 %) think that it is not the superiors priorities at work. But only 42 of them (i.e. 15.1 %) think that it is a priority.

10.2.3.2.3 Personal Initiatives

This aspect is categorized in this study into five groups, these are, 1. very much agree, 2. agree, 3. uncertain, 4.disagree, and, 5. very much disagree. Table 10.11 below shows our findings.

Table 10.11: Personal Initiatives

	Agree		Uncertain		Disagree		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	3	75.0	1	25.0	-	-	4	100
2.Financial Plann.	2	50.0	2	50.0	-	-	4	100
3.M.D.Secretariat	4	100.0	-	-	-	-	4	100
4.Data Processing	6	75.0	2	25.0	-	-	8	100
5.Administration	8	34.8	5	21.7	10	43.5	23	100
6.Material Acquis.	9	39.1	6	26.1	8	34.8	23	100
7.Flight Operation	8	61.5	5	38.5	-	-	13	100
8.Coordination	18	72.0	4	16.0	3	12.0	25	100
9.Finance	11	45.8	7	29.2	6	25.0	24	100
10.General Serv.	15	42.9	10	28.6	10	28.6	35	100
11.Marketing	17	48.6	9	25.7	9	25.7	35	100
12.Engineering	21	52.5	8	20.0	11	27.5	40	100
13.Customer Serv.	18	45.0	9	22.5	13	32.5	40	100
Total	140	50.4	68	24.5	70	25.2	278	100

Table 10.11 shows that 140 of the respondents (i.e. 50.4 %) think that personal initiatives is one of the priorities of the superiors, 70 of them (i.e. 25.2 %) disagree with that and think that it is not the priority of the superiors, 68 of them (i.e. 24.5 %) have no idea about it. It is worth mentioning here that nearly have of the respondents think that the personal initiatives is their superior's priority.

10.2.3.2.4 Efficiency

Whether efficiency is the superior's priority or not, the study has categorized the aspect into five groups, these are, 1. very much agree, 2. agree, 3. uncertain, 4. disagree, and, 5. very much disagree. Table 10.12 below indicates our findings.

Table 10.12: Efficiency

Departments	Agree F	%	Uncertain F	%	Disagree F	%	Total F	%
1.Corporate Plann.	3	75.0	1	25.0	-	-	4	100
2.Financial Plann.	2	50.0	2	50.0	-	-	4	100
3.M.D.Secretariat	4	100.0	-	-	-	-	4	100
4.Data Processing	3	37.5	2	25.0	3	37.5	8	100
5.Administration	8	34.8	5	21.7	10	43.5	23	100
6.Material Acquis	8	34.8	7	30.4	8	34.8	23	100
7.Flight Operation	8	61.5	4	30.8	1	7.7	13	100
8.Coordination	19	76.0	4	16.0	3	12.0	25	100
9.Finance	12	50.0	7	29.2	6	25.0	24	100
10.General Serv.	16	54.7	10	28.6	10	28.6	35	100
11.Marketing	15	42.9	11	31.4	9	25.7	35	100
12.Engineering	16	40.0	7	17.5	15	37.5	40	100
13.Customer Serv.	16	40.0	13	32.5	10	25.0	40	100
Total	130	46.7	73	26.3	75	27.0	278	100

Table 10.12 shows that 130 of the respondents (i.e. 46.7 %) think that efficiency is their superior's priority, 75 of the respondents (i.e. 27 %) disagree with that, 73 of them (i.e. 26.3 %) do not have an idea about it.

10.3 Behaviour of PIA's Employees

The study has concentrated on three behavioural issues, these are, 1. Absenteeism, 2. Tardiness, and, 3. Responsibility Preference. Following is a brief discussion on each of them.

10.3.1 Absenteeism

Absenteeism is examined by the study through two aspects, these are, 1. Absence with permission to leave the work-place, and 2. Absence without getting permission. In the following we will presents our findings in regard to both aspects.

10.3.1.1 Absence with permission

This aspect is being examined to find out what do the employees expect from their superiors when they have to be absent. Do they expect their superiors to ask for written applications or just asking for permission verbally? Table 10.13 below shows our findings.

Table 10.13: Absence With Permission

Departments	Verbally F	Verbally %	In writing F	In writing %	Total F	Total %
1.Corporate Planning	2	50.0	2	50.0	4	100
2.Financial Planning	3	75.0	1	25.0	4	100
3.M.D.Secretariat	2	50.0	2	50.0	4	100
4.Data Processing	6	75.0	2	25.0	8	100
5.Administration	16	69.6	7	30.0	23	100
6.Material Acquisition	17	73.9	6	26.1	23	100
7.Flight Operation	10	76.9	3	23.1	13	100
8.Coordination	9	36.0	16	64.0	25	100
9.Finance	10	41.7	14	58.3	24	100
10.General Services	10	28.6	25	71.4	35	100
11.Marketing	12	34.3	23	65.7	35	100
12.Engineering Maint.	13	32.5	27	67.5	40	100
13.Customer Services	12	30.0	28	70.0	40	100
Total	122	43.9	156	56.1	278	100

Table 10.13 indicates that 156 of the respondents (i.e. 56.1 %) expect their superiors to ask for permission in writing before getting permission to be absent. While 122 of the respondents (i.e. 43.9 %) expect their superiors to ask for permission verbally before getting permission to be absent.

10.3.1.2 Absence Without permission

This aspect is being examined to find out how many times do the employees have been absent without permission in the last six months. This aspect is categorized into three groups, these are, 1. none, 2. between 1-3 times. and, 3. more than 4 times. Table 10.14 below summarizes our findings.

Table 10.14: Absence Without Permission

	None		1-3 times		More than 4times		Total	
Departments	F	%	F	%	F	%	F	%
1.Corporate Plann.	3	75.0	1	25.0	-	-	4	100
2.Financial Plann.	4	100.0	-	-	-	-	4	100
3.M.D.Secretariat	3	75.0	1	25.0	-	-	4	100
4.Data Processing	7	87.5	1	12.5	-	-	4	100
5.Administration	14	60.0	6	26.1	3	13.0	8	100
6.Material Acquis.	12	52.2	7	30.0	4	17.4	23	100
7.Flight Operation	8	61.5	3	23.1	2	15.4	23	100
8.Coordination	10	40.0	11	44.0	4	16.0	13	100
9.Finance	17	70.0	5	20.8	2	8.3	25	100
10.General Serv.	28	80.0	5	14.3	2	5.7	24	100
11.Marketing	26	74.3	7	20.0	2	5.7	35	100
12.Engineering	32	80.0	6	15.0	2	5.0	40	100
13.Customer Serv.	29	72.5	9	22.5	2	5.0	40	100
Total	193	69.4	62	22.3	23	8.3	278	100

Table 10.14 shows that 193 of the respondents (i.e. 69.4 %) have not left the work place without getting permission in the last six months, 62 of them (i.e. 22.3 %) have left the work place between 1-3 times without permissions in the last six months, while 23 of respondents (i.e. 8.3 %) have been absent for more than four times without permissions in the last six months.

10.3.2 Tardiness

This aspect is attempted to examine the period of late time allowed for the subordinates which leads to the assessment of the employees behaviour accordingly. The study has categorized the late time period allowed into five groups, these are, 1. less than 15 minutes, 2. between 15-30 minutes, 3. between 30-45 minutes, 4. between 45-60 minutes, and, 5. more than an hour. Table 10.15 below shows our findings, which indicates that 100 of the respondents (i.e. 36.0 %) think that the allowed period is between 15-30 minutes, 70 of them (i.e. 25.2 %) expect to be asked by their superiors for explanations of being late for a period between 45-60 minutes, 59 of them (i.e. 21.2 %) think that they would be asked to state an explanation for their lateness for the period of more than one hour, and 49 of the respondents (i.e. 17.6 %) think that the allowed period is between 30-45 minutes.

Table 10.15: Tardiness

Depts. No.	Between 15-30 F	%	Between 31-45 F	%	Between 46-60 F	%	More than one hour F	%	Total F	%
1.	-	-	-	-	2	50.0	2	50.0	4	100
2.	-	-	1	25.0	2	50.0	1	25.0	4	100
3.	-	-	-	-	1	25.0	3	75.0	4	100
4.	-	-	-	-	3	37.5	5	62.5	8	100
5.	1	4.3	2	8.7	9	39.1	11	47.8	23	100
6.	-	-	-	-	8	34.8	15	65.2	23	100
7.	1	7.7	1	7.7	4	30.8	7	53.8	13	100
8.	3	12.0	4	16.0	10	40.0	8	32.0	25	100
9.	2	8.3	6	25.0	9	37.5	7	29.2	24	100
10.	18	51.4	10	28.6	7	20.0	-	-	35	100
11.	11	31.4	11	31.4	13	37.1	-	-	35	100
12.	29	72.5	9	22.5	2	5.0	-	-	40	100
13.	35	87.0	5	12.5	-	-	-	-	40	100
Total	100	36.0	49	17.6	70	25.2	59	21.2	278	100

10.3.3 Responsibility Preference

This aspect is attempted to examine the employee's opinions toward their responsibilities. In other words, to investigate the willingness of the employees of having the responsibilities at work. The study has categorized the aspect of the responsibility preference into three groups, these are; 1. high level of job with high level of responsibility, 2. medium level of job with medium level of responsibility, and, 3. simple level of job with no responsibility.

Table 10.16 below shows our findings, which indicate that 95 of the respondents (i.e. 34.2 %) like to have high levels of jobs with high levels of responsibilities, 109 of the respondents (i.e. 38.8 %) prefer medium level of jobs with medium level of responsibilities, while 74 of the respondents (i.e. 27 %) prefer simple jobs with no responsibilities.

Table 10.16: Responsibility Preference

Departments	High		Medium		Simple		Total	
	F	%	F	%	F	%	F	%
1.Corporate Plan.	-	-	1	25.0	3	75.0	4	100
2.Financial Plan.	-	-	1	25.0	3	75.0	4	100
3.M.D.Secrateriat	-	-	1	25.0	3	75.0	4	100
4.Data Processing	1	12.5	2	25.0	5	62.5	8	100
5.Administration	1	4.3	8	30.4	14	65.2	23	100
6.Material Acqis.	2	8.7	12	52.2	9	39.1	23	100
7.Flight Operations	2	15.4	8	61.5	3	23.1	13	100
8.Coordination	3	12.0	13	52.0	9	36.0	25	100
9.Finance	6	25.0	11	45.8	7	29.2	24	100
10.General Serv.	18	51.4	12	34.3	5	14.3	35	100
11.Marketing	17	48.6	13	37.1	5	14.3	35	100
12.Engineering	21	52.5	15	37.5	4	10.0	40	100
13.Customers serv.	24	60.0	12	30.0	4	10.0	40	100
Total	95	34.2	109	38.8	74	27.0	278	100

It is worth mentioning, that the employees in the small departments prefer to have less responsibilities in their work, while the employees in the larger departments prefer to have higher level of jobs and responsibilities.

10.4 Relationship Between Size and Attitudes.

In examining the relationship between size and attitudes of the employees, we will focus on the following relationships, these are: 1. between size and job attitudes which include, a. source of motivation, b. job satisfaction, c. job rotation (which consist of changing the job, and the transfer to other department or other organization). 2. between size and co-workers relationship which include: a. number of co-workers, b. number of close friends, c. frequency of meeting them. and, 3. between size and supervisory relationships which include: a. the nature of the relationship between subordinates and superiors, b. superior's priority at work (which consist of getting work done, application of rules and regulations, personal initiatives, and efficiency). Following is a brief discussion of these relationships and associations.

10.4.1 Association Between Size And Job Attitudes.

Regarding the association between size and job attitudes, we will analyse through the association between size and each of the following aspects, first, the source of motivation, second, job satisfaction, and third, job rotation. The statistical technique of Chi-square will be utilized to find out if there are differences regarding job attitudes among different size groups of departments. Table 10.17 shows our findings.

Table 10.17: Association Between Size and Job Attitudes

Job Attitudes	X^2	D.F.	P
1. Source of Motivation	---	---	---
2. Job Satisfaction	14.595	6	0.02
3. Job Rotation			
a. Changing Job	---	---	---
b. Transfer in or out	14.040	2	0.0009

Table 10.17 indicates that there is no association between size and source of motivation (appeal factors), chi-square was found insignificant at any level, which accept the null hypothesis (there are no differences). Recalling data from Table 10.1 which shows that the majority of the respondents in every department have indicated that the salary was the most appeal factor when joining the organization. In regard to our findings concerning the job satisfaction, Table 10.17 shows that there are association between size and job satisfaction, (X^2 = 14.595, p = 0.02) which reject the null hypothesis

(there are no differences), that means, there are differences in the departments which indicates that the degree of satisfaction varys in the departments (small, medium, large), this supports the findings in Table 12.2. As for the association between size and job rotation (propensity to change), the findings in Table 10.17 shows that there are no association between size and changing jobs, chi-square was found not to be significant at any level. Thus the null hypothesis (there are no differences in the departments) is accepted. The findings also show that there are differences among the small, medium, and large departments in regard to the propensity to change the job to other department within the organization or to other job in other organization. Chi-square was found to be significant, (X^2 = 14.141, P = 0.0009), and the null hypothesis is rejected. Recalling the data shown in Tables 10.3, and 10.4 which clearly supports this result.

10.4.2 Relationship Between Size and Co-workers Relationships.

In examining the relationship between size of the departments and the co-workers relationship, we will emphasized three sets of relationships, these are, 1. relationship between size and number of co-workers, 2. relationship between size and number of close friends, and 3. relationship between size and frequency of meeting them outside the work place. Chi-square and sperman correlation coefficients will be utilized for this purpose. Table 10.18 shows our findings.

Table 10.18: Relationship Between Size and Co-workers

	Chi-square test			Correlation test	
Co-workers Relationship	X^2	D.F.	P	r	p
1.Number of Co-workers	63.289	4	0.000	0.474	0.000
2.Number of Close Friends	18.594	4	0.05	0.350	0.000
3.Frequency of meeting them (outside work place)	12.189	6	0.05	0.122	0.02

Regarding the first aspect of co-workers relationship (which is the number of co-workers), Table 10.18 shows that there is association between size and number of co-workers, Chi-square was found statistically significant, (X^2 = 63.289, p = 0.000) which reject the null hypothesis (there is no difference), which means that there are differences in regard to the number of co-workers in the small, medium, and large groups of the departments. In examining the nature of this association, Sperman Correlation Coefficient was found statistically significant too, (r = 0.474, p = 0.000), that means the number of co-workers increases as size of the departments increases and visa versa. As for the relationship between size and number of close friends, our findings indicated in Table 10.18 shows that there is association between size and number of close friends, chi-square was found to be significant (X^2 = 18.594, p = 0.05) which reject the null hypothesis (there is no difference). That means there are differences among the departments regarding the number of close friends. The correlation Coefficient was found statistically significant between them, (r = 0.350, p = 0.000). Which indicate a significant positive relationship between size and the number of close friends, which shows that the number of close friends increases, when the size of the department increases and vise versa. Finally, in examining the relationship between size and the frequency of meeting the close friends outside the work place, our findings shows in Table 10.18 indicates that there is association between them, chi-square was found significant (X^2 = 12.189, p = 0.05) which reject the null hypothesis (there is no difference). This result indicates that there are differences in the departments in regard to the frequency of meeting close friends outside the work place. The correlation coefficient was found to be significant between them (r = 0.122, p = 0.02), which means that there is a positive relationship between the size and the frequency of meeting them outside the work place.

10.4.3 Association Between Size and Supervisory Relationship.

In examining the association between size and supervisory relationship, the study has emphasized two sets of associations, these are, 1. association between size and nature of the relationship between subordinates and their superiors, and 2. association between size and the superior's priorities at work, which indicates four sub-sets of associations, they are, a. association between size and getting work done, b. association between size and application of rules and regulations, c. association between size and personal initiatives, and d. association between size and efficiency. Table 10.19 summarizes our findings, which shows that there is no significant association between size and nature of the relationship in the department, chi-square was found to be insignificant at any level which means that the null hypothesis (there is no difference) is accepted. Recalling data from Table 10.8 which shows that the respondents were divided between good and satisfactory in all departments which supports the findings in Table 10.19. For the second set of the supervisory relationship, our findings suggest that there is a significant association between size and getting work done as the superior's priority at work. Chi-square was found significant ($X^2 = 10.890$, $p = 0.02$) which means that the null hypothesis (there is no difference) is rejected.

Table 10.19: Association Between Size and Supervisory Relationships.

Supervisory Relationship Aspects	X^2	D.F.	P
1. Nature of the Relationship	---	----	----
2. Superior's Priority at Work			
A. Getting work done	10.879	4	0.02
B. Application of rules and regulations	20.197	4	0.0005
C. Personal Initiatives	---	---	---
D. Efficiency	---	---	---

This result indicates that there are differences in the departments (small, medium, and large) in regard to the getting work done as a superior's priority at work. Regarding the association between size and the application of rules and regulation as a superior's priority at work, Table 10.19 shows that there is a significant association between them ($X^2 = 20.197$, $p = 0.0005$) which means that the null hypothesis is rejected. This result indicates that there are significant differences among the departments (small, medium, and large) regarding the application of rules and regulations as a superior's priority at work. Our findings shown in Table 10.19 indicates that there is no significant association between size and personal initiatives and between size and efficiency, which means that the null hypotheses are accepted (there are no differences).

10.5 Association Between Size and Behaviour

In examining the relationship between size and behaviour of the employees, we will concentrate on the following associations, these are, 1. between size and absenteeism, 2. between size and number of times of leaving the work place with out permissions in the last six months, 3. between size and tardiness, and, 4. between size and responsibility preference. Chi-squares were utilized to find the association between each of them. Table 10.20 shows our findings. It shows that there is a significant association between size and absence with permission ($X^2 = 22.899$, $P = 0.000$) which means that the null hypothesis (there is no difference) is rejected. This result indicates that there are differences among the departments (small, medium, and large) concerning the absenteeism of the employees with permission in regard to the way the employees apply for permission (verbally or in writing). Recalling the data shown in table 10.13 which indicates that the percentages vary from department to another department.

Table 10.20: Association Between Size and Behaviour

Behavioural Aspects	X^2	D.F.	P
1. Absenteeism			
A. Absence with permission	22.899	2	0.000
B. Absence without permission	12.684	4	0.012
C. Lateness time allowed	133.275	4	0.000
2. Type of responsibility	81.287	4	0.000

That means there is no specific method adapted by all the employees in all the departments in connection with the way the employees apply for permissions to leave the work place.

As for the absenteeism without permission, Table 10.20 indicates that it has a significant association with size of the department ($X^2 = 12.684$, $P = 0.01$) in which the null hypothesis is rejected (there is no differences) that shows differences among the departments (small, medium, and large). Table 10.14 support the findings and indicates that there are differences in connection with employees who do not leave without permission, or those who leave the work place without permission in the departments. As far as the tardiness cases are concerned, the result in Table 10.20 shows that it has a significant association with size (X^2 = 133.275, P = 0.000) which means, there are significant differences between size of the department and tardiness cases. Recalling data shown in table 9.15 which support this result and indicates that there is no specific rules and regulations in regard to the tardiness (lateness time cases allowed), these lateness time cases varys from department to another (small, medium, and large). Finally, Table 10.20 shows a significant association between size and responsibility preference (X^2 = 81.287, P = 0.000), that indicates a significant differences among the thirteen departments.

10.6 Association Between Employees Attitudes and Behaviour

In examining the association between attitudes and behaviour of the PIA's employees, we will concentrate on the following associations, these are; 1. between absenteeism, which include absence with permission, absence without permission, tardiness, and attitudinal aspects. 2. between responsibility preference and attitudinal aspects. Our findings indicate that there are no significant association found between absenteeism without permission and attitudinal aspects, chi-square were found to be insignificant at 0.05 level, that means the null hypothesis are accepted (there are no differences). Regarding the absenteeism with permission, and, attitudinal aspects the only association found is with the number of co-workers (staff members), (X^2 = 15.765, P = 0.0004, at 2 degrees of freedom), that means the null hypothesis is rejected, which indicates that there are differences among the number of co-workers and the employees who get permission before being absent in the departments. As far as the association between tardiness and the attitudinal aspects is concerned, our findings indicate that, there is a significant association between tardiness and each of the following attitudinal aspects, a. with job satisfaction (X^2 = 13.502, P = 0.03, at 6 degrees of freedom), that means the null hypothesis is rejected and there are differences among the employees who usually attend late and job satisfaction. b. with the transfer to other job (X^2 = 15.329, P = 0,0005, at 2 degrees of freedom), that means the null hypothesis is rejected and shows that there are differences among the employees who attend late and the employees who wish to transfer to other job (to other department, or to other organization). c. with number of co-workers (X^2 = 32.276, P = 0.000, at 4 degrees of freedom) which means that the null hypothesis are rejected and indicate that there are significant differences among the employees who usually attend late and the number of co-workers in the departments. As far as the association between responsibility preference and attitudinal aspects are concerned, our findings suggest that there is no significant association between type of responsibility and any of the attitudinal aspects, chi-squares were found to be insignificant at the level of 0.05, that means the null hypothesis are accepted and there are no differences between them in the departments.

10.7 Association Between Attitudes and Organizational Culture

In analyzing the association between the employees attitudes and the organizational culture, our findings indicates that there are associations between some of the attitudinal aspects and organizational culture as follows:

1. There is a significant association between job satisfaction and one of the aspects of decision making (which is the awareness of work problems), (X^2 = 7.954, P = 0.04, at 3 degrees of freedom) which means that there are differences in the departments concerning this aspect and the null hypothesis is rejected.

2. There is a significant association between the number of co-workers and means of routine work communication in the organization (X^2 = 11.286, P = 0.02, at 4 degrees of freedom) which means that the null hypothesis is rejected (there is no differences), and indicate that there are differences between number of co-workers and means of routine work communication in the departments.

3. There is a significant association between number of close friends and the ways of applying for permission to leave the work place, (X^2 = 6.807, P = 0.03, at 2 degrees of freedom), which indicate that there are differences between them in the departments.

4. There is a significant association between the frequency of meeting friends outside the work place and the time spend on coordination and supervisory tasks, (X^2 = 15.653, P = 0.01, at 6 degrees of freedom), which shows that there are significant differences between the attitudes of the employees toward the frequency of meeting their close friends outside the work place and the time spent on the coordination and supervisory tasks in the departments.

5. There is a significant association between the nature of the relationship between the superiors-subordinates and the awareness of the activities of other sections, divisions, and departments (X^2 = 9.670, P = 0.04, at 4 degrees of freedom), that means the null hypothesis is rejected and there are significant differences between those variables in the departments.

6. There is a significant association between the "getting work done" (as one of the superior's priorities at work) and the responses of the top management to the routine work communication, (X^2 = 12.351, P = 0.01, at 4 degrees of freedom), that means the null hypothesis is

rejected and there are significant differences between those two variables among the departments.

7. There is a significant association between the application of rules and regulation (as one of the superior's priorities at work) and each of the following two cultural aspects (coordination), firstly, with the time spent on coordination and supervisory tasks (X^2 = 16.623, P = 0.002, at 4 degrees of freedom), and secondly, with the type of relationship between section, divisions, and departments, (X^2 = 15.653, P = 0.01, at 6 degrees of freedom), that means the null hypothesis are rejected and there are significant differences among those variables among the thirteen departments.

8. There is a significant association between personal initiatives (as one of the superior's priorities at work), and application of rules and regulations (as one of the management perceptions for the advancement in the organization), X^2 = 21.569, P = 0.001, at 6 degrees of freedom, that means there are significant differences between these two variables among the departments.

9. There is a significant association between efficiency (as one of the superior's priorities at work) and application of rules and regulations (as one of the management perceptions for the advancement in the organization), X^2 = 17.936, P = 0.06, at 6 degrees of freedom, which means that the null hypothesis is rejected

and indicate that there is a significant differences between them among the departments.

10.8 Association Between Employee's Behaviour and Organizational Culture.

In examining the association between the behaviour and the organizational culture, our findings indicate that there is a significant association between responsibility preference (employee's opinions toward their responsibilities), and time spent on coordination and supervisory tasks, (X^2 = 14.705, P = 0.02, at 6 degrees of freedom) which means that the null hypothesis is rejected and indicate that there are significant differences regarding those variables in the departments. The findings also suggest that there is a significant association between the lateness time allowed and responses of the top management to the non routine work communication, (X^2 = 10.142, P = 0.03, at 4 degrees of freedom) which means that the null hypothesis is rejected (there are no differences) and indicate that there are differences concerning those variables among the departments.

10.9 Summary

This chapter has been devoted to analyse the attitudes and the behaviour of the PIA's employees and establish a relationship between them. And to find the relationships between attitudes and behaviour with each of the size and the organizational culture in the departments.

Regarding the attitudes of the PIA employees, three issues has been concentrated on, there are; 1. Job attitudes (which include the source of motivation, job satisfaction, and job rotation). 2. Co-workers relationships (which include, number of co-workers, number of close friends, frequency of meeting close friends outside the work place). 3. Supervisory relationships (which include, the nature of the relationship with superiors, and superior's priority at work).

Regarding the first issue, our findings indicate that the majority of our respondents have joined the organization because they expect a higher salary than in other organizations and the majority of them are satisfied with their jobs. The majority of the respondents do not prefer to change their jobs. For the second issue (which is the co-workers relationships), the study suggests that the majority of the respondents have more than 40 employees working with them, and among them they have between 1-10 of their couleqes as close friends, they some times meet outside the work place. As far as the third issue (which is the supervisory relationships) is concerned, our study indicates that all the respondents think that their relationships with their superiors are either good or satisfactory, and the majority of the employees think that the "getting work done" is one of the first priority of their superiors at work, while the majority of the respondents are uncertain whether the application of rules and regulations are their superior's priority at work, but they think that the personal initiative is one of the superior's priorities at work. Finally they think that efficiency is one of their superior's priorities at work.

As far as the behaviour of PIA's employees is concerned, the study has concentrated on two issues, these are; 1. Absenteeism (which include, absenteeism with permission, and absenteeism without permission). 2. Tardiness, and 3. Responsibility preference. As for the absenteeism, our findings suggest that, 56 % of the employees expect their superior to ask for permission in writing before getting permission to be absent, while, 46 % of them expect their superiors to ask for permission verbally. Our study suggests that the majority of the employees have not left the work place without getting permission in the last six months and some of them have left the work place between 1 -3 times without permission, and few of them have been absent for more than four times without permission in the last six months. Our study indicate that there are variation between the employees opinions concerning the lateness time allowed, about 36 % of them expect to be asked by their superiors for an explanation being late for period between 15-30 minutes, 25 % of them think that the allowed period is between 46-60 minutes, and 21 % think that it is more than one hour.

As for the responsibility preference (employees opinions toward their responsibilities), our findings suggest that 34 % of the respondents like to have high level of jobs with high level of responsibilities, 38 % of them prefer medium level of jobs with medium level of responsibilities, while 27 % of them prefer to have simple jobs with no responsibilities.

In regard to our findings concerning the relationships and associations among these variables, the study indicates the following findings:

1. Between size and attitudes

The study shows that the attitudes of the employees (which include, job attitudes, co-workers relationships, and supervisory relationships) are highly and significantly associated with the size of the departments. That means the attitudes of the employees differ in the departments which have larger size than in the departments which are smaller.

2. Between size and behaviour

The study indicates that the behaviour of the employees (which include, absenteeism, tardiness, and, responsibility preference) are highly and significantly associated with the size of the departments. Which means that the behaviour of the employees differ from the departments which have larger size than in the departments which have smaller.

3. Between employee's attitudes and behaviour

Our findings indicate that absenteeism with permission is highly and significantly associated with the attitudinal aspects (no. of co-workers). Tardiness was found to be significantly associated with the following attitudinal aspects; these are: job satisfaction, job rotation, and, number of co-workers.

4. Between attitudes and organizational culture.

The findings indicate that the attitudes of the employees are highly and significantly associated with the aspects of the organizational culture (which include, control, communication, coordination, decisions making, and, management perceptions). Which shows that the attitudes of the employees differ according to the nature of the organizational culture's aspects in each department.

5. Between behaviour and organizational culture.

Our findings indicate that the behaviour of the employees are highly and significantly associated with two aspects of the organizational culture, namely, communication and coordination.

Chapter Eleven

Structural-Behavioural Relationships

11.1 Introduction

This chapter aims to investigate in the final stage the relationships and the associations among organizational structure, administrative component, attitudes, behaviour, and organizational culture. For the structural differentiation, the study examined both the horizontal and the hierarchical differentiation. Regarding the horizontal differentiation, two aspects have been included, these are; number of divisions in each department, and number of sections in each division, while for the hierarchical differentiation, two aspects have been examined, these are; number of levels of authority and the attributes of the senior officials which include, age, education, and seniority. Three aspects of the relative size of the administrative component have been examined, these are; the ratio between the senior officials and the remaining employees in each department, the ratio between sub-professionals and labour class, and the span of control. As far as the attitudes of the employees are concerned, three aspects have been included, these are; job attitudes (which include, source of motivation, job satisfaction, and job rotation), co-workers relationships (which include, number of co-workers, number of close friends, frequency of meeting close friends outside the work place), supervisory relationship (which include, the nature of the superiors-subordinates relationships, and superior's priorities at work). Three behavioural aspects have been examined, which include, absenteeism, tardiness, and, responsibility preference (employee's opinion toward their responsibilities). And finally, five aspects of organizational culture have been examined, these are; control, communication, coordination, decision making, and management perceptions. In this context, this chapter will summarize our findings in regard to six issues, these are; 1. Relationships between structural differentiation and attitudes of the employees, 2. Relationships between structural differentiation and behaviour of the employees, 3. Relationships between structural differentiation and organizational culture, 4. Relationships between the administrative component and the attitudes of the employees, 5. Relationships between the administrative component and the behaviour of the employees, and 6. Relationships between the administrative component and the organizational culture.

11.2 Association Between Structural Differentiation and the Attitudes of the Employees.

In examining the association between the organizational structure and the attitudes of the employees, the study will analyse the associations in regard to both aspects of the organizational structure, which are, the horizontal and the hierarchical differentiation. Following is a brief discussion on our findings.

11.2.1 Association Between the Horizontal Differentiation and the Attitudes of the Employees.

Regarding the association between the horizontal differentiation (which include, number of divisions in each department, and number of sections in each division), and the attitudes of the employees (which include, job attitudes, co-workers relationship, and supervisory relationships). Following is a deducted associations.

As for the relationship between the first aspect of the horizontal differentiation, which is the number of divisions in each department, and the attitudes of the employees, the study suggests the following associations:

1. There is a significant association between number of

divisions and job attitudes, (job rotation), $X^2 = 9.873$, $P = 0.007$, at 2 degrees of freedom, that means the null hypothesis is rejected and there are significant differences between those two variables among the departments. 2. There is a significant association between number of divisions and co-workers relationship, (number of co-workers), $X^2 = 9.198$, $P = 0.05$, at 4 degrees of freedom, that indicates, the null hypothesis is rejected and there are significant differences between those variables among the departments. 3. There is a significant association between number of divisions and supervisory relationship, (personal initiatives, as one of the superior's priorities at work), $X^2 = 16.486$, $P = 0.002$, at 4 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences in regard to those variables among the departments.

As far as the association between number of divisions and the other attitudinal aspects are concerned, the study has indicated that there are no significant associations between them and Chi-Squares were found to be insignificant at level 0.05, which means that the null hypothesis are accepted and there are no significant differences between number of divisions and other attitudinal aspects among the departments.

Regarding the second aspect of the horizontal differentiation, which is the number of sections in each division, our findings indicates the following associations: 1. There is a significant association between number of sections and job attitudes (job satisfaction), X^2 = 16.359, P = 0.01, at 6 degrees of freedom, which means that the null hypothesis (there is no difference) is rejected and indicates that there are significant differences between those two variables among the departments. 2. There is a significant association between number of sections and job attitudes (job rotation) , X^2 = 16.197, P = 0.04, at 2 degrees of freedom that means the null hypothesis is rejected and suggest that there are significant differences between those two variables in the thirteen departments. 3. There is a significant association between number of sections and co-workers relationships (number of co-workers), X^2 = 23.785, P = 0.001, at 4 degrees of freedom, which means that the null hypothesis (there is no difference) is rejected and indicates that there are significant differences between number of sections and number of co-workers (staff members) among the departments. 4. There is a significant association between number of sections and co-workers relationship (number of close friends), X^2 = 20.473, P = 0.0004, at 4 degrees of freedom, that means the null hypothesis is rejected and suggests that there are significant differences between those two variables in the thirteen departments. 5. There is a significant association between number of sections and supervisory relationship (getting work done, as one of the superior's priorities at work), $X^2 = 15.562$, $P = 0.003$, at 4 degrees of freedom, which means that the null hypothesis is rejected and suggests that there are significant differences between those two variables among the departments. And finally, 6. There are a significant association between number of sections and supervisory relationships (personal initiatives, as one of the superior's priorities at work), $X^2 = 19.863$, $P = 0.0005$, at 4 degrees of freedom , which indicates that the null hypothesis is rejected and there are significant differences concerning those two variables among the departments.

As for the association between number of sections and the other attitudinal aspects, the study has indicated that there are no significant associations between them, and Chi- squares were found to be insignificant at level 0.05, which means that the null hypothesis are accepted and there are no significant differences between number of sections and the other attitudinal aspects among the departments.

Summing up the above findings, it can be noticed that the attitudes of the employees, which include, job attitudes, co-workers relationships, and, supervisory relationships are highly and significantly associated with both aspects of the horizontal differentiation, namely, number of divisions in each department, and number of sections in each division. In addition, it can be argued that the attitudes of the employees are more significantly associated with number of sections in each division than the number of divisions in each department.

These findings indicate that the attitudes of the employees differ from the department which has more number of divisions and sections than in the department which has less.

11.2.2 Association Between the Hierarchical Differentiation and the Attitudes of the Employees.

In examining the association between the hierarchical differentiation and the attitudes of the employees, the study has included two aspects of the hierarchical differentiation, these are, number of levels of authority, and the attributes of the senior officials (which include, age, education, and seniority).

Regarding the association between the first aspect of the hierarchical differentiation which is the levels of authority and the attitudes of the employees, our findings suggest the following associations: 1. There is a significant association between number of levels of authority and co-workers relationship (number of co-workers), $X^2 = 20.159$, $P = 0.0005$, at 4 degrees of freedom, that means the null hypothesis is rejected and there are significant differences between them in the thirteen departments. 2. There is a significant association between number of levels of authority and co-workers relationship (number of close friends), X^2 = 9.626, P = 0.04, at 4 degrees of freedom, that means the null hypothesis (there is no difference) is rejected and indicates that there are significant differences between them among the departments. 3. There is a significant association between number of levels of authority and supervisory relationship (personal initiatives, as one of the superior's priorities at work), X^2 = 10.860, P = 0.2, at 4 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences between those variables among the departments.

Our findings also shows that there are no significant associations between number of levels of authority and other attitudinal aspects, Chi-squares were found to be insignificant at 0.05 level, and the null hypothesis (there are no differences) are accepted, which means that there are no significant differences among them in the thirteen departments.

For the association between the second aspect of the hierarchical differentiation , which is the attributes of the senior officials, and the attitudes of the employees, our findings indicate that there are number of associations among them, which are as followed; 1. There is a significant association between age and co-workers relationship (the frequency of meeting friends), X^2 = 12.531, P = 0.05, at 6 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables. 2. There is a significant association between seniority and co-workers relationship (frequency of meeting friends), X^2 = 21.706, P = 0.04, at 12 degrees of freedom, that means the null hypothesis is rejected and there are differences between these variables among the departments. 3. There is a significant association between seniority and supervisory relationship, (the relationship between superiors and the subordinates), X^2 = 16.112, P = 0.04, at 8 degrees of freedom, this indicates that the null hypothesis (there is no difference) is rejected and there are significant differences between them among the departments. 4. There is a significant association between seniority and supervisory relationship (personal initiatives, as one of the superior's priorities at work), X^2 = 16.820, P = 0.03, at 8 degrees of freedom, the null hypothesis is rejected and this result indicates that there are significant differences between them among the thirteen departments. 5. There is a significant association between seniority and supervisory relationship (efficiency, as one of the superior's priorities at work), X^2 = 16.187, P = 0.03, at 8 degrees of freedom, that indicate the null hypothesis is rejected and there are significant differences between those two variables among the departments.

Summarizing the above findings, it is evident from the above mentioned associations that two aspects of the attitudes of the employees, which are, co-workers relationships, and supervisory relationships are highly and significantly associated with both aspects of the hierarchical differentiation, which are, levels of authority and the attributes of the senior officials.

More specifically, co-workers relationships and supervisory relationships are highly and significantly associated with levels of authority and seniority of the senior officials . No associations were found between the hierarchical differentiation and job attitudes.

It can be argued that the attitudes of the employees differ from department which has more levels of authority and more senior superiors than in the department which has less.

11.3 Association Between Structural Differentiation and the Behaviour of the Employees.

In analyzing the association between the structural differentiation and the behaviour of the employees, the study has examined both aspects of the structural differentiation (horizontal and hierarchical) with the behaviour of the employees (which include, absenteeism, tardiness, and responsibility preference (employee's opinion toward their responsibilities). Following is a brief discussion on these associations.

11.3.1 Association Between Horizontal Differentiation and the Behaviour of the Employees.

In examining the association between the horizontal differentiation and the behaviour of the employees, the study has examined the horizontal differentiation through the number of divisions in each department and the number of sections in each divisions. Regarding the association between number of divisions and the behaviour of the employees, the study suggests the following associations; 1. There is a significant association between number of divisions and absenteeism (absenteeism with permission), $X^2 = 14.070$, $P = 0.04$, at 7 degrees of freedom, that means the null hypothesis (there is no difference) is rejected and there are significant association between these two variables among the departments. 2. There is a significant association between number of divisions and tardiness, $X^2 = 58.597$, $P = 0.000$, at 14 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences between those two variables among the departments. 3. There is a significant association between number of divisions and responsibility preferencet (employee's opinions towards their responsibilities), X^2 = 39.258, P = 0.000, at 14 degrees of freedom, that means the null hypothesis is rejected and there are significant differences between them among the departments. The study has also indicates that there are no significant associations between number of divisions and other behavioural aspects, Chi-Squares were found to be insignificant at 0.05 level, that means the null hypothesis are accepted and there are no differences between them in the departments.

For the association of the second aspect of the horizontal differentiation, which is the number of sections, and the behavioural aspects, the study indicates the following associations; 1. There is a significant association between number of sections and absenteeism (absenteeism with permission), X^2 = 18.485, P = 0.04, at 10 degrees of freedom, that means the null hypothesis is rejected and there are significant differences between them among the departments. 2. There is a significant association between the number of sections and tardiness, X^2 = 31.630, P = 0.000, at 10 degrees of freedom which indicate that the null hypothesis is rejected and there are significant differences between these variables among the departments. 3. There is a significant association between number of sections and responsibility preference (employee's opinions towards their responsibilities), $X^2 = 51.480$, $P = 0.000$, at 20 degrees of freedom, that means there are significant differences between these two variables among the departments.

From the above findings, it can be noticed that the behaviour of the employees which include, absenteeism, tardiness, and, responsibility preference (employee's opinions toward their responsibilities), are highly and significantly associated with both aspects of the horizontal differentiation, which are, number of divisions in each department, and number of sections in each division.

These associations indicate that the behaviour of the employees differ from the department which has more number of divisions and sections than in the department which has less.

11.3.2 Association Between the Hierarchical Differentiation and the Behaviour of the Employees.

In examining the association between the hierarchical differentiation and the behaviour of the employees, the study has included two aspects of the hierarchical differentiation, these are, number of levels of authority and the attributes of the senior officials (which include, age, education, seniority). Regarding the first aspect of the hierarchical differentiation (which is the number of levels of authority), Our study suggests the following associations with the behaviour of the employees; 1. There is a significant association between the levels of authority and absenteeism (absenteeism with permission) in the departments, $X^2 = 21.201$, $P = 0.001$, at 6 degrees of freedom, which indicates that the null hypothesis is rejected, and there are significant differences between these two variables in the departments. 2. There is a significant association between the levels of authority and absenteeism (absenteeism without permission), $X^2 = 20.715$, $P = 0.05$, at 12 degrees of freedom which indicate that the null hypothesis is rejected (there are no differences), and suggests that there are significant differences among the departments regarding those two variables. 3. There is a significant association between number of levels of authority and tardiness, $X^2 = 18.581$, $P = 0.0009$ at 4 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables. 4. There is a significant association between levels of authority and responsibility preference (employee's opinions towards their responsibilities), $X^2 = 21.087$, $P = 0.0003$, at 4 degrees of freedom, which indicates that the null hypothesis is rejected and there are significant differences among the departments regarding those variables.

For the associations of the second aspect of the hierarchical differentiation (which is the attributes of the senior officials) and the behaviour of the employees, our study suggests that there are no significant association between the hierarchical differentiation and the behaviour of the employees, Chi-Squares were found to be insignificant at 0.05 level, that means the null hypothesis are accepted and shows that there are no significant differences among the departments concerning these variables.

In summarizing the above findings, it can be argued that the behaviour of the employees which include absenteeism, tardiness, and responsibility preference (employee's opinions toward their responsibilities), are highly and significantly associated with one of the hierarchical differentiational aspects, which is , the levels of authority.

These associations show that the behaviour of the employees differ from the department with more levels of authority and the department with less.

11.4 Association Between Structural Differentiation and the Organizational Culture

In examining the association between the structural differentiation and the organizational culture in each department, the study has emphasized both aspects of the structural differentiation (horizontal and hierarchical) with the aspects of the organizational culture, (which include, control, communication, coordination, decision making, and, management perceptions). Following is a brief discussion on these associations.

11.4.1 Association Between Horizontal Differentiation and Organizational Culture

In examining the association between the structural differentiation and the organizational culture, the study has measured the horizontal differentiation through the number of divisions in each department and the number of sections in each division.

Regarding the relationship between the first aspect of the horizontal differentiation (which is the number of divisions in each department), and the organizational cultural aspects, the study suggests the following associations: 1. There is a significant association between number of divisions in each department and communication (responses of the top management in regard to the non-routine work communications), $X^2 = 10.622$, $P = 0.03$ at 4 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables. 2. There is a significant association between number of divisions in each department and the management perception towards the advancement in the organization (application of rules and regulations), $X^2 = 12.110$, $P = 0.05$, at 6 degrees of freedom. which indicates that the null hypothesis is rejected and there are significant differences among the departments in regard to these variables.

Our findings also suggests that there are no significant association between number of divisions and other organizational cultural aspects, Chi-Squares were found to be insignificant at 0.05 level which indicates that the null hypothesis are accepted and there are no significant differences among the departments in regard to those variables.

As for the associations between the second aspect of the horizontal differentiation (which is the number of sections in each division) and the aspects of the organizational culture, the following associations were found between them: 1. There is a significant association between number of sections and coordination, (the time spent on coordination and supervisory tasks), $X^2 = 15.572$, $P = 0.01$, at 6 degrees of freedom, which means that the null hypothesis is rejected and there are significant association between those two variables among the thirteen departments. 2. There is a significant association between the number of sections in each division and decision making, (the awareness of work problems in each department), $X^2 = 7.405$, $P = 0.02$, at 2 degrees of freedom, which means that the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables. 3. There is a significant association between the number of sections in each division and management perception, (the authority available), $X^2 = 10.304$, $P = 0.03$, at 4 degrees of freedom, that indicates the null hypothesis (there is no difference) is rejected and shows that there are significant differences among the departments regarding those two variables. 4. There is a significant association between number of sections in each division and management perception toward the advancement in the organization, (the application of rules and regulations), $X^2 = 18.237$, $P = 0.005$, at 6 degrees of freedom, that means the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables.

Our findings also indicate that there are no significant association between number of sections and other aspects of the organizational culture, Chi-Squares were found to be insignificant at 0.05 level, which means that the null hypothesis (there is no difference) are accepted and shows that there are no significant differences among the departments in regard to these variables.

Summing up our findings, it can be noticed that the aspects of the organizational culture are highly and significantly associated with both aspects of the horizontal differentiation, namely, number of divisions, and number of sections. More specifically, the communication and management perceptions towards the advancement in the organization are significantly associated with number of divisions in each department, and the aspects of coordination, decisions making, and management perception are significantly associated with number of sections in each division.

It can be argued that the aspects of the organizational culture are more significantly associated with number of sections than with number of divisions. Therefore, the nature of the organizational culture's aspects differ from the department which has more divisions and sections than in the department which has less.

11.4.2 Association Between the Hierarchical Differentiation and the Organizational Culture.

In analyzing the associations between the hierarchical differentiation and the organizational culture, the study has utilized two aspects of the hierarchical differentiation, which are; first, number of levels of authority, and, second, the attributes of the senior officials.

As for the association between the first aspect of the hierarchical differentiation (which is the number of levels of authority), and the organizational culture's aspects. Our findings suggests the following associations between them: 1. There is a significant association between number of levels of authority and coordination, (time spent on coordination and supervisory tasks), X^2 = 13.942, P = 0.03, at 6 degrees of freedom, that indicates the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables. 2. There is a significant association between number of levels of authority and decision making, (the awareness of work problems), X^2 = 12.842, P = 0.001, at 2 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences among the departments regarding those two variables. 3. There is a significant association between number of levels of authority and management perception, (authority available), X^2 = 14.193, P = 0.006, at 4 degrees of freedom, which means that the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables.

Our findings also indicates that there are no significant associations between number of levels of authority and other aspects of the organizational culture, Chi-Squares were found to be insignificant at level 0.05, which indicates that the null hypothesis are accepted and there are no significant differences among the thirteen departments in regard to those variables.

As for the relationship between the second aspect of the hierarchical differentiation (which is the attributes of the senior officials) and the organizational culture's aspects, our findings suggest the following associations: 1. There is a significant association between seniority and communication, (means of the routine work communication), $X^2 = 15.633$, $P = 0.04$, at 8 degrees of freedom, that means the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables. 2. There is a significant association between seniority and communication (the responses of the top management to the non-routine work communication), $X^2 = 14.353$, $P = 0.05$, at 8 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the departments regarding those two variables. 3. There is a significant association between seniority and management perception, (authority available), $X^2 = 14.173$, $P = 0.05$, at 8 degrees of freedom, that indicates the null hypothesis is rejected and there are significant differences among the departments concerning those two variables. 4. There is a significant association between the seniority and management perception toward the advancement in the organization, (the application of rules and regulations), $X^2 = 29.331$, $P = 0.003$, at 12 degrees of freedom, that means the null hypothesis is rejected and there are significant differences among the departments concerning those two variables.

From the above findings, it can be seen that coordination and management perceptions are highly and significantly associated with number of levels of authority, while communication and management perceptions are highly and significantly associated with seniority. Therefore, it can be argued that communication and management perception's aspects differ from the department which has more levels of authority than in the department which has less. Coordination and management perception's aspects differ in the department which has more senior officials than in the department which has less.

11.5 Association Between the Administrative Component and the Attitudes of the Employees

In examining the association between the administrative component and the attitudes of the employees, the study has measured the administrative component through the following aspects: first, the ratio between the senior officials to the remaining employees in each department (S.O./Sub Prof.+L), second, the ratio between the Sub

Professionals to the labour class in each department (Sub prof./L), and third, the span of control in each department.

In analyzing the association between the first aspect of the administrative component (S.O./Sub Prof.+L) and the attitudes of the employees, the study suggests the following associations: 1. There is a significant association between S.O./ Sub. Prof.+L) and co-workers relationship, (number of co-workers), $X^2 = 14.189$, $P = 0.006$, at 4 degrees of freedom, which means that the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables. 2. There is a significant association between S.O./ Sub. Prof.+L and supervisory relationship, (the application of rules and regulations) as one of the superior's priorities at work, $X^2 = 9.833$, $P = 0.04$, at 4 degrees of freedom, that indicates the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables.

Our findings also indicate that there are no significant association between S.O./ Sub.Prof.+L and the other attitudinal variables, Chi-Squares were found to be insignificant at level 0.05, which means that the null hypothesis are accepted and shows that there are no significant differences among the departments in regard to those variables.

As for the association between the second aspect of the administrative component (which is the ratio between the sub professionals to the labour class) and the attitudes of the employees, our findings suggests that there are no significant association between them, Chi-Squares were found ton be insignificant and therefore, the null hypothesis are accepted which shows that there are no significant differences among the departments concerning these variables.

Finally, our findings regarding the association between the third aspect of the administrative component (which is the span of control) and the attitudes of the employees, suggests the following associations: 1. There is a significant association between the span of control and co-workers relationship, (number of co-workers), X^2 = 19.599, P = 0.0006, at 4 degrees of freedom, which indicates that the null hypothesis is rejected and shows significant differences among the thirteen departments regarding those two aspects. 2. There is a significant association between the span of control and co-workers relationship, (number of close friends), X^2 = 9.836, P = 0.05, at 4 degrees of freedom, which means that the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables.

Our findings also suggest that there are no significant association between span of control and other attitudinal aspects, Chi-Squares were found to be insignificant at level 0.05 which means the null hypothesis are accepted and shows no significant differences among the departments regarding these variables.

Summing up the findings, it can be noticed that the attitudes of the employees are significantly associated with S.O./Sub Prof.+L and span of control in each department. More specifically, co-workers relationships are highly associated with S.O./Sub Prof.+L and span of control in each department. Supervisory relationships are also associated with S.O./Sub Prof.+L.

It can be argued, that the co-workers relationships are more significantly associated with span of control than with S.O./Sub Prof.+L. Therefore, co-workers relationships differ in the department which has more S.O./Sub Prof.+L and more span of control than in the department which has less.

11.6 Association Between the Administrative Component and the Behaviour of the Employees.

In examining the association between the administrative component and the behaviour of the employees, the study has used the following three aspects of the administrative component, these are; first, S.O./Sub.Prof.+L, second, Sub.Prof./L, and third, the span of control. Following is a brief discussion on these associations.

In examining the association between the first aspect of the administrative component (which is S.O./Sub.Prof.+L) and the behaviour of the employees, our findings suggest the following associations: 1. There is a significant association between S.O./Sub.Prof.+L and absenteeism, (the absenteeism with permission), X^2 = 18.938, P = 0.0001, at 2 degrees of freedom, which means that the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables. 2. There is a significant association between S.O./Sub.+L and tardiness, X^2 = 33.070, P = 0.000, at 4 degrees of freedom, which indicate that the null hypothesis is rejected and there are significant differences among the departments regarding those two variables. 3. There is a significant association between S.O./Sub.Prof.+L and responsibility preference (employee's opinions towards their responsibilities), X^2 = 27.478, P = 0.000, at 4 degrees of freedom, which means that the null hypothesis is rejected and shows that there are significant differences among the thirteen departments concerning those two variables.

As for the association between the second aspect of the administrative component (which is Sub.Prof./L) and the behaviour of the employees, our findings suggest the following: 1. There is a significant association between sub prof./L and absenteeism, (absenteeism with permission), $X^2 = 9.756$, $P = 0.02$, at 1 degrees of freedom, which indicate that the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables. 2. There is a significant association between sub.prof./L and tardiness, $X^2 = 14.993$, $P = 0.05$, at 2 degrees of freedom, which indicate that the null hypothesis is rejected and there are significant differences among the departments concerning those two variables.

Finally, in examining the association between the third aspect of the administrative component (which is the span of control) and the behaviour of the employees, our findings suggest the following associations: 1. There is a significant association between the span of control and absenteeism, (absenteeism with permission), $X^2 = 13.200$, $P = 0.001$, at 2 degrees of freedom, which indicates that the null hypothesis is rejected and there are significant differences among the departments concerning those two variables. 2. There is a significant association between the span of control and tardiness, $X^2 = 25.159$, $P = 0.000$, at 4 degrees of freedom, which indicates that the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables. 3. There is a significant association between the span of control and responsibility preserence (employee's opinions towards their responsibilities), $X^2 = 11.304$, $P = 0.02$, at 4 degrees of freedom, which means that the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables.

From the above findings, it can be noticed that the behaviour of the employees are highly and significantly associated with S.O./Sub Prof.+L, and Sub Prof./L, and span of control. Absenteeism and tardiness are significantly associated with S.O./Sub Prof.+L,and Sub Prof./L, while, on the other hand, absenteeism, tardiness, and responsibility preference (employee's opinions towards their responsibilities), are significantly associated with span of control.

It can be argued, that the behaviour of the employees are more significantly associated with span of control than with the ratios of S.O./Sub Prof.+L and Sub Prof.+L. Therefore, the behaviour of the employees differ in the department which has more ratios of S.O./Sub Prof.+L and Sub Prof./L and more span of control than in the department which has less.

11.7 Association Between the Administrative Component and the Organizational Culture

In examining the association between the administrative component and the organizational culture, the study emphasized three aspects of the administrative component, which are; I. S.O./Sub.Prof.+L, II. Sub.Prof./L, and, III. Span of control. Five aspects of the organizational culture were also examined, which are; I. Control, II. Communication, III. Coordination, IV. Decision Making, and, V. Management Perceptions. Following is a brief discussion on the associations among them.

11.7.1 Association Between S.O./Sub.Prof.+L and the Organizational Culture.

In analyzing the association between S.O./Sub.Prof.+L and the organizational culture's aspects, the study suggest the following findings: 1. There is a significant association between S.O./Sub.Prof.+L and coordination, (the time spend on coordination and supervisory tasks), $X^2 = 24.769$, $P = 0.0004$, at 4 degrees of freedom, that means the null hypothesis is rejected and there are significant differences among the departments concerning those two variables. 2. There is a significant association between S.O./Sub.+L and decision making, (the awareness of work problems), $X^2 = 9.460$, $P = 0.008$, at 2 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the thirteen departments in regard to those two variables. 3. There is a significant association between S.O./Sub.Prof.+L and communication, (the means of routine work communications), $X^2 = 14.871$, $P = 0.005$, at 4 degrees of freedom, that indicates the null hypothesis is rejected and there are significant differences among the departments in regard to those two variables. 4. There is a significant association between S.O./Sub.Prof.+L and management perception, (the authority available), X^2 = 20.787, P = 0.0003, at 4 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the departments concerning those two variables.

Our findings also suggest that there are no significant association between S.O./Sub.Prof.+L and other aspects of the organizational culture, Chi-Squares were found to be insignificant at level 0.05 which means the null hypothesis are accepted and shows that there are no differences among the departments concerning these variables.

Summarizing the above findings, the aspects of the organizational culture are highly and significantly associated with the ratio of S.O./Sub Prof.+L. Specifically, coordination, decisions making, communication, management perceptions are highly and significantly associated with that ratio. It can be argued that coordination and management perception's aspects are more significantly associated with that ratio than communication and decisions making. However, the nature of these aspects of the organizational culture differ in the department in which has higher ratio than in the department which has lower.

11.7.2 Association Between Sub.Prof./L and the Organizational Culture.

In examining the association between Sub.Prof./L and the organizational culture, our findings suggest the there is a significant association between sub.prof./L and management perception, (authority available), X^2 = 6.288, P = 0.04, at 2 degrees of freedom, that means the null hypothesis is rejected and shows significant differences among the departments concerning those two variables.

Our findings also suggest that there are no significant association between sub prof./L and other aspects of the organizational culture, Chi-Squares were found to be insignificant at 0.05 level, which indicate that the null hypothesis are accepted and shows that there are no significant differences among the thirteen departments regarding these variables.

From the above findings, it can be noticed that only one aspect of the organizational culture which is the management perceptions, is significantly associated with this ratio.

11.7.3 Association Between Span of Control and Organizational Culture.

In examining the association between the span of control and organizational culture, our findings suggest the following associations: 1. There is a significant association between span of control and control, (the relationship between superiors and subordinates), X^2 = 15.263, P = 0.004, at 4 degrees of freedom, that means the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables. 2. There is a significant association between span of control and control, (the responses of the superiors for the lateness cases), X^2 = 13.754, P = 0.008, at 4 degrees of freedom, that indicates the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables. 3. There is a significant association between span of control and coordination, (time spent on coordination and supervisory tasks), X^2 = 25.047, P = 0.0003, at 6 degrees of freedom, that means the null hypothesis is rejected and indicates that there are significant differences among the thirteen departments concerning those variables. 4. There is a significant association between span of control and decision making, (the awareness of the work activities), X^2 = 10.805, P = 0.004, at 2 degrees of freedom, that indicates the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables. 5. There is a significant association between the span of control and communication, (means of routine work communication), $X^2 = 12.274$, $P = 0.01$ at 4 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the departments in regard to those two variables. 6. There is a significant association between span of control and communication, (means of non-routine work communication), $X^2 = 9.79$, $P = 0.05$, at 4 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the departments concerning those two variables. 7. There is a significant association between span of control and communication (responses of the top management toward the routine work communication), $X^2 = 13.637$, $P = 0.008$, at 4 degrees of freedom, that indicates the null hypothesis is rejected and shows that there are significant association among the departments in regard to those two variables. 8. There is a significant association between span of control and management perception, (authority available), $X^2 = 16.069$, $P = 0.002$ at 4 degrees of freedom, that means the null hypothesis is rejected and shows significant differences among the departments in regard to those two variables. 9. There is a significant association between span of control and management perception, (efficiency), $X^2 = 13.600$, $P = 0.008$, at 4 degrees of freedom, that means the null hypothesis is rejected and shows that there are significant differences among the departments concerning those two variables.

Summing up these findings, it can be noticed that all the aspects of the organizational culture are highly and significantly associated with the span of control in each department. Therefore, the nature of the aspects of the organizational culture differ from the department which has low span of control than in the department which has higher.

11.8 Summary

This chapter has been aimed to investigate the relationships between the structural and behavioural aspects, in more specific terms, to find the relationships and the associations among organizational structure, administrative component, employee's attitudes, employee's behaviour, and organizational culture.

In regard to our findings concerning the relationships and the associations among the above mentioned variables, the study suggests the following findings:

1. Between structural differentiation and the attitudes of the employees.

Our findings show that, the attitudes of the employees are highly and significantly associated with structural (horizontal and hierarchical) differentiation.

As for the horizontal differentiation, the study shows that, job attitudes, co-workers relationships, and supervisory relationships are highly associated with both aspects of the horizontal differentiation, namely, number of divisions in each department, and, number of sections in each division. It is worth mentioning, that the attitudes of the employees are more significantly associated with number of sections in each division than the number of divisions in each department.

For the hierarchical differentiation, two aspects of the attitudes of the employees, which are, co-workers relationships, and supervisory relationships are highly and significantly associated with both aspects of the hierarchical differentiation, which are, levels of authority and the attributes of the senior officials.

Therefore, it can be argued, that the attitudes of the employees differ from department which has more number of divisions and sections, more levels of authority, and, more senior officials, than in the department which has less of these aspects.

2. Between structural differentiation and behaviour of the employees.

The study indicates that the behaviour of the employees which include, absenteeism, tardiness, and, responsibility preference, are highly and significantly associated with both aspects of the structural (horizontal and hierarchical) differentiation.

As for the horizontal differentiation, the study shows that the behaviour of the employees are highly and significantly associated with both aspects of the horizontal differentiation, which are, number of divisions, and, number of sections.

For the hierarchical differentiation, the study indicates that, the behaviour of the employees which include, absenteeism, tardiness, and, responsibility preference are highly and significantly associated with one of the hierarchical differentiation, which is the level of authority.

It can be concluded that, the behaviour of the employees differ from the department which has more number of divisions, sections, and levels of authority, than in the department with less of these aspects.

3. Between structural differentiation and organizational culture.

The study indicates that the organizational culture (which include, control, communication, coordination, decisions making, and, management perceptions) in PIA is highly and significantly associated with both aspects of the structural differentiation (horizontal and hierarchical).

As for the horizontal differentiation, the study shows that two aspects of the organizational culture (which are communication and management perceptions) are highly and significantly associated with number of divisions in each department. While on the other hand, three aspects of the organizational culture (which are, coordination, decisions making, and, management perceptions) are highly and significantly associated with number of sections in each division. Therefore, it can be argued that the nature of the aspects of communication and management perceptions differ in the departments which have more number of divisions than in the departments with less number of divisions. On the other hand, the nature of the aspects of coordination, decisions making, and management perceptions differ from the departments which have more number of sections than in the departments which have less.

For the hierarchical differentiation, the study shows significant association between organizational culture and hierarchical differentiation. More specifically, the aspects of coordination, decisions making, and management perceptions are highly and significantly associated with the number of levels of authority. While the aspects of communication and management perceptions are highly and significantly associated with seniority.

4. Between administrative component and the attitudes of the employees.

The study indicates that the attitudes of the employees are significantly associated with two aspects of the administrative component (which are, the ratio between senior officials and the remaining employees, and span of control). More specifically, the co-workers relationships are highly and significantly associated with S.O./Sub Prof.+L and span of control. In addition, the supervisory relationships are also associated with the same ratio.

It can be argued , that the attitudes of the employees differ in the departments which have higher ratio between senior officials and other employees and higher span of control than in the departments which have lower.

5. Between administrative component and the behaviour of the employees.

The study shows that the behaviour of the employees (which are, absenteeism, tardiness, and responsibility preference) are highly and significantly associated with all the aspects of the administrative component (which are, S.O./Sub Prof.+L, Sub Prof./L, and span of control).

It can be added that the behaviour of the employees differ in the departments which have higher the ratios of S.O./Sub Prof.+L, and Sub Prof./L and higher span of control than in the departments which have less. It is worth mentioning, that the behaviour of the employees are more significantly associated with the aspects of the administrative components than the attitudes of the employees do with those aspects.

6. Between administrative component and the organizational culture.

The study indicates that the aspects of the organizational culture (which are, communication, control, coordination, decision making and management perceptions) are highly and significantly associated with the administrative component's aspects (which include, S.O./Sub Prof. +L, and span of control).

Our findings shows that the aspects of coordination, decisions making, communication, and, management perceptions are highly and significantly associated with S.O./Sub Prof.+L. Management perceptions are significantly associated with Sub Prof./L, while the aspects of control, coordination, decisions making, communication, and management perceptions are highly and significantly associated with the span of control.

It can be argued, that the nature of the aspects of the organizational culture differ in the departments which have higher ratios of S.O./Sub Prof.+L and Sub Prof./L and higher span of control than in the departments which have lower.

It is worth mentioning, that the aspects of the organizational culture are more significantly associated with the ratio of S.O./Sub Prof.+L and the span of control than with the ratio of Sub Prof./L.

Chapter Twelve

Overall Associations Between the Selected Variables

Conclusions and Suggestions

12.1. Introduction

This is the final chapter of the study. It intends to shed light on the following two aspects:

First; to investigate the overall associations between the selected variables.

Second; to propose our conclusions regarding the relationships among these variables and to make other suggestions for future research.

Focussing on the overall associations between the selected variables, the partial associations between; (i) size and structural differentiation, size and administrative component, and, structural differentiation and administrative component (see chapter 8); (ii) size and organizational culture, (see chapter 9); (iii) size and attitudes, size and behaviour, attitudes and behaviour, attitudes and organizational culture, behaviour and organizational culture (see chapter 10), and, (iv) structural differentiation and attitudes, structural differentiation and behaviour, structural differentiation and organizational structure, administrative component and attitudes, administrative component and behaviour, and, administrative component and organizational culture (see chapter 11), will be utilized in our attempt to establish an overall association between all these variables. Finally we will propose our conclusions regarding the relationships among these variables, and to offer recommendations for future research.

12.2 Structure and Attitudes

Analyzing the associations between structure and attitudes we will present our findings under two main headings. These are, 1. the relationship between structural differentiation and attitudes, and, 2. the relationships between the administrative component and attitudes.

12.2.1 Structural Differentiation and Attitudes

The relationships between structural differentiation and attitudes will be dealt with on two basis, these are; 1. the relationships between the horizontal differentiation and attitudes, and, 2. the relationships between the hierarchical differentiation and attitudes. These are analysed below.

12.2.1.1 Horizontal Differentiation and Attitudes

Section 11.2.1 summarizes our findings regarding the association between the two aspects of the horizontal differentiation and our attitudinal indices. According to these findings, the following conclusions can be drawn:

1. As far as the job attitudes of the PIA's employees are concerned, it is evident that : A. The employees job rotation is highly and significantly associated with number of divisions in each department and number of sections in each division. B. The employees job satisfaction is highly and significantly associated with number of sections in each division.

2. For the employees co-workers relationships, our findings suggest that: A. The number of co-workers is highly and significantly associated with number of divisions in each department and number of sections in each division. B. Number of close friends is highly associated with number of sections in each division.

3. As for the supervisory relationships, our findings indicate: A. Personal initiatives as one of the superior's priorities at work is highly and significantly associated with number of divisions in each department and number of sections in each division. B. Getting work done as one of the superior's priorities at work is

highly and significantly associated with number of sections in each division.

Summing up these findings, it can be argued that while both aspects of the horizontal differentiation (number of divisions in each department, and number of sections in each division) are significantly associated with job attitudes, co-workers relationships, and, supervisory relationships, it is the number of sections in each division which is more significantly associated with them.

12.2.1.2 Hierarchical Differentiation and Attitudes

The association between the hierarchical differentiation and the attitudes of the PIA's employees are reported in section 11.2.2. According to these findings, the following conclusions can be drawn:

1. As far as the employees job attitudes are concerned, the findings show that they have no significant associations with the hierarchical differentiation's aspects.

2. With regard to the co-workers relationships of the employees, our findings indicate: A. Number of co-workers is highly and significantly associated with number of levels of authority. B. Number of close friends is highly

and significantly associated with number of levels of authority. C. Frequency of meeting friends is highly and significantly associated with age and seniority.

3. Concentrating on supervisory relationships of the employees, our findings indicate: A. Personal initiatives as one of the superior's priorities at work is highly and significantly associated with number of levels of authority and seniority of the senior officials. B. Subordinate-superior's relationships is highly and significantly associated with seniority. C. Efficiency as one of the superior's priorities at work is highly and significantly associated with seniority.

It can be concluded, that the number of levels of authority and the attributes of the senior officials, are highly and significantly associated with co-workers relationships and supervisory relationships.

12.2.1.3 Structural Differentiation and Attitudes: Recapitulation

From the findings presented in (12.2.1.1), and, (12.2.1.2), above, it can be argued that:

1. The job attitudes of the PIA's employees are more significantly associated with horizontal differentiation.

2. The co-workers relationships of the PIA's employees are more significantly associated with hierarchical differentiation.

3. The supervisory relationships of the PIA's employees are more significantly associated with hierarchical differentiation.

12.2.2 The Administrative component and Attitudes

In examining the relationships between the administrative component and attitudes, we will reflect on our findings reported in chapter eleven (section 11.5). According to these findings, it can be concluded that:

1. As far as the PIA employees job attitudes are concerned, it is evident that they have no significant association with the administrative component.

2. Regarding the employees of PIA co-workers relationships the findings indicate that: a. The number of co-workers is highly and significantly associated with the span of control and the administrative ratios. b. The number of close friends is highly and significantly associated with the span of control.

3. For the supervisory relationships of the employees of the PIA, our findings indicate that the application of rules and regulations as one of the superior's priorities at work is highly and significantly associated with the administrative ratios.

12.2.2.1 The Administrative component and Attitudes: Recapitulation

From the findings reported in (12.2.2), above, it can be concluded that:

1. The co-workers relationships of the PIA's employees are more significantly associated with the span of control.
2. The supervisory relationships of the PIA's employees are more significantly associated with the administrative ratios.

12.3 Organizational Culture and Attitudes

Focussing on the relationships between the organizational culture and attitudes, we will reflect on our findings reported in chapter ten (section 10.6), which include five aspects of the organizational culture (control, communication, coordination, decision making, and, management perceptions) and the employees attitudes. According to these findings, the following conclusions can be drawn:

1. As far as the employees job attitudes are concerned, the findings indicate that the employees job satisfaction are highly and significantly associated with the decision making.
2. Regarding the employees of the PIA's co-workers

relationships, it is evident that: A. The number of co-workers is highly and significantly associated with communication aspect. B. The number of close friends is highly and significantly associated with control aspect. C. The frequency of meeting close friends outside the workplace is highly and significantly associated with coordination aspect.

3. For the supervisory relationships of the PIA employees, the findings indicate that: A. The nature of the relationships between the superiors and subordinates are highly and significantly associated with decision making. B. Getting work done as one of the superior's priorities at work is highly and significantly associated with communication aspect. C. The application of rules and regulations as one of the superior's priorities at work is highly and significantly associated with coordination. D. Personal initiatives as one of the superior's priorities at work is highly and significantly associated with management perceptions for the advancement in the organization. E. Efficiency as one of the superior's priorities at work is highly and significantly associated with management perceptions for the advancement in the organization.

12.3.1 Organizational Culture and Attitudes: Recapitulation

From the findings presented in (12.2.3), above, it can be concluded that:

1. The job attitudes of the PIA's employees are more significantly associated with decision making.
2. The co-workers relationships of the PIA's employees are more significantly associated with control, communication and coordination aspects.
3. The supervisory relationships of the PIA's employees are more significantly associated with decision making and management perceptions.

12.4 Structure and Behaviour

Examining the relationships between the structural differentiation and behaviour of the employees, we will concentrate on: 1. The relationships between structural differentiation and behaviour, and, 2. The relationships between the administrative component and behaviour. Following is a brief discussion on each of them.

12.4.1 Structural Differentiation and Behaviour

The relationships between structural differentiation and behaviour will be explored in a two-fold basis. Firstly, the relationship between the horizontal differentiation and behaviour, and, secondly, the relationship between the hierarchical differentiation and behaviour.

12.4.1.1 Horizontal Differentiation and Behaviour

In examining the relationships between the horizontal differentiation and behaviour, we will reflect on our findings reported in chapter eleven (section 11.3.1). According to these findings, it can be argued that:

1. As far as the PIA employees absenteeism are concerned, the findings indicate that the absenteeism are highly and significantly associated with number of divisions in each department and number of sections in each division.
2. For the employees tardiness, our findings indicate that, the employees tardiness are highly and significantly associated with number of divisions in each department and number of sections in each division.
3. Regarding the employees opinions toward their responsibilities, our findings indicate that responsibility preferences are highly associated with number of divisions in each department and number of sections in each division.

12.4.1.2 Hierarchical Differentiation and Behaviour

From the findings reported in chapter eleven (section 11.3.2), the following conclusions can be drawn:

1. As far as the employees absenteeism are concerned, the findings indicate that they are highly and significantly associated with the number of levels of authority.
2. Regarding the employees tardiness, the findings indicate that they are highly and significantly associated with the number of levels of authority.
3. For the responsibility preference, our findings indicate that they are highly and significantly associated with the number of levels of authority.

12.4.1.3 Structural Differentiation and Behaviour: Recapitulation

From the findings reported in (12.4.1.1, and, 12.4.1.2), above, it can be argued that:

1. The behavioural aspects are highly and significantly associated with the horizontal differentiation.
2. The behavioural aspects are highly and significantly associated with one of the hierarchical aspect which is the number of levels of authority.

12.4.2. Administrative component and Behaviour

Examining the relationships between the administrative component and the behaviour, we will reflect on our findings reported in chapter eleven (section 11.6). According to these findings, it can be concluded that:

1. As far as the PIA employees absenteeism are concerned, it is evident that they are highly and significantly associated with the administrative ratios as well as with the span of control.
2. Regarding the PIA employees tardiness, the findings indicate that they are highly and significantly associated with the administrative ratios as well as with the span of control.
3. For the responsibility preference, our findings indicate that they are highly and significantly associated with the administrative ratios as well as with the span of control.

12.4.3 Administrative component and Behaviour: Recapitulation

From the findings reported in (12.4.2), above, it can be concluded that the behavioural indices (absenteeism, tardiness, and, the employees opinions toward their responsibilities) are more significantly associated with the horizontal differentiation than with the hierarchical differentiation.

12.5 Organizational Culture and Behaviour

Focussing on the relationship between the organizational culture and the behaviour, we will reflect on our findings reported in chapter ten (section 10.7), which include five aspects of the organizational culture, (control, communication, coordination, decision making, and, management perceptions), and the employees behaviour. According to these findings, the following conclusions can be drawn:

1. Regarding the employees tardiness, the findings indicate that they are highly and significantly associated with communication aspect.
2. For the responsibility preference, the findings indicate that they are highly and significantly association with coordination aspect.

Having presented our findings concerning the relationships between the structural and behavioural aspects in PIA, we will in the following concentrate on overall associations between all the variables incorporated in this study. Our proposed model (see chapter 7) will be recalled and the empirical associations will be compared to the theoretical postulates suggested in that model.

12.6 Size, Structure, Organizational Culture, and, Behaviour: Explanations

In order to examine the relevance of the model proposed in chapter 7, we will utilize the various structural and attitudinal aspects incorporated in this study in explaining our three behavioural indices (i.e. absenteeism, tardiness, and employees opinions toward their responsibilities). This will be attempted in three stages. Firstly, we will examine the associations between the three behavioural indices and the various variables individually; secondly, we will explain the association between any interrelated variables and the behavioural index under investigation; thirdly, we will utilize the interrelated explanation in assessing the overall association between size, structural differentiation, the administrative component, organizational culture, employees attitudes, and their behaviour.

12.6.1 Behavioural indices: Partial Explanations

Following is a brief summary to all the detected associations between the three behavioural aspects and all other variables. These associations will be utilized to develop explanations of the relationships between these variables and the behavioural aspects under examination.

12.6.1.1 Absenteeism

Table 12.1 below summarizes the detected associations between absenteeism and the variables incorporated. It shows the link between absenteeism and: A. Number of Employees, B. Three aspects of the structural differentiation (number of divisions, number of sections, and, levels of authority), C. Two aspects of the administrative component (administrative ratios, and, span of control), and, D. One aspect of the employees attitudes (number of co-workers).

Concentrating on the association between absenteeism and number of employees in each department, the explanation for this could be that, the more employees in the department, the more absenteeism ratio will be expected, since the absenteeism is related directly to employees. In other words, employees who practice the absenteeism.

The detected association between number of divisions, and absenteeism, could be based on the above explanation, once the departments create more divisions and sections (more specialization), they need more employees to occupy these divisions and sections, thus, the more divisions and sections in the departments, the more employees are needed, the more absenteeism ratio is expected.

As far as the association between absenteeism and number of levels of authority, it can be argued that creating more divisions and sections necessitate more levels of authority.

Table 12.1: Absenteeism: Explanations

Variables	Suggested Explanations
A. Size	
1. Number of Employees	Number of Employees
2.Personal Characteristics of Employees	------
B. Structural Differentiation	
1. Horizontal Differentiation	Specialization
2. Hierarchical Differentiation	Levels of Authority
C. Administrative Component	
1. Administrative Ratios	Administrative Ratios
2. Span of Control	Span of Control
D. Organizational Culture	
1. Control	------
2. Communication	------
3. Coordination	------
4. Decision Making	------
5. Management Perceptions	------
E. Employees Attitudes	
1. Job Attitudes	------
2. Co-workers Relationships	Number of Co-Workers
3. Supervisory Relationships	------

This will lead to establishing sections under divisions, thus, the more levels of authority created as a result of increasing the burden of work, the more employees are needed to help accomplishing the work. Since absenteeism is associated with number of employees, therefore, levels of authority , number of divisions, and, number of sections could have such a relationship with absenteeism.

The association between absenteeism and the administrative ratios, span of control, and, number of co-workers, could again be explained , that each of the above variables is associated with the number of employees i.e. administrative ratios are; first, the ratio between senior officials and the remaining employees in each department and, secondly, the ratio between sub professionals to the labour class. These administrative ratios have relationships with absenteeism because, the number of employees, constitutes the denominator of this ratio which means that the number of employees in each department affects these ratios, as well as its affect on the absenteeism ratio.

As to the span of control and its association with absenteeism, the explanation to this could be that the larger the span of control, the less efficient the supervisor would be to control the employees, thus, absenteeism is expected. While, on the other hand, when the span of control is narrow, which means that the number of employees supervised by a supervisor is small, the absenteeism ratio would be expected to be less.

Finally, the association between the number of co-workers and absenteeism could be related to the fact that the larger the number of co-workers, the more their attitudes and behaviour would be subject to change, i.e. they might affect each other positively or negatively. This means that one co-worker might encourage his friend to leave the work place if he wishes to do so. On the other hand, a co-worker might behave negatively if he sees his colleagues leaving the work place specially without permission and without punishment, thus, he might do so. This will result in increasing the absenteeism ratio.

12.6.1.2 Tardiness

Table 12.2 below summarizes the associations between tardiness and variables incorporated. It shows that tardiness is related to: A. Number of employees, B. Three aspects of the structural differentiation (number of divisions, sections, and,levels of authority), C. Two aspects of the administrative component (administrative ratios, and, span of control), D. One aspect of the organizational culture (communication), E. Three aspects of the employees attitudes (job satisfaction, job rotation, and, number of co-workers).

Concentrating on the association between tardiness and number of employees, number of divisions, and, sections in each department, levels of authority, administrative ratios, number of co-workers, and, span of control. This could be justified as mentioned earlier, under absenteeism, that the number of employees affects each of the above variables. Therefore, as the number of employees increases number of tardiness cases would be increased and vice versa.

As far as the association between the administrative ratios and tardiness is concerned, it could be argued that the existence of large administrative ratios could lead to formalize the associations between the superiors and the subordinates as well as the dominance of inflexible bureaucratic procedures, tardiness, we suggest could be a reaction on the employees part towards these bureaucratic procedures.

As for the association between tardiness and communication system, it can be argued that the communication system has its effect on the efficiency of the organization (departments, divisions, and, sections), because the work cannot be accomplished accurately without applying effective communication system. Thus, the more efficient the communication system, the less the tardiness cases would be, while less efficient communication system could create more tardiness cases.

Table 12.2: Tardiness: Explanations

Variables	Suggested Explanations
A. Size	
1. No. of Employees	No. of Employees
2. Personal Characteristics of Employees	-------
B. Structural Differentiation	
1. Horizontal Differentiation	No. of Divisions No. of Sections
2. Hierarchical Differentiation	No. of Levels of Authority
C. Administrative Component	
1. Administrative Ratios	S.O./Sub Prof.+L Sub Prof./L
2. Span of Control	Span of Control
D. Organizational Culture	
1. Control	-------
2. Communication	Communication
3. Coordination	-------
4. Decision Making	-------
5. Management Perceptions	-------
E. Employees Attitudes	
1. Job Attitudes	Job Satisfaction Job Rotation
2. Co-workers Relationships	No. of Co-workers
3. Supervisory Relationships	

As far as the association between and job satisfaction are concerned, this could be justified as once the employees are satisfied with their jobs, they will be enthusiastic to do the job, and more cooperation between them is expected to exist. Therefore, tardiness cases are expected to be less, while if they are not satisfied with their job, they are unlikely to do their work effectively, and tardiness cases are likely to exist. Finally, the association between tardiness and job rotation, it can be argued that, once the employee stays in one job for a long period of time without being promoted or rotated to other job, his work will be routine and might create dissatisfaction, therefore, tardiness cases might exist. Thus, job rotation might be beneficial to both the organization, department, division, section, and, the employees himself. This explains the findings that a significant association between job rotation and tardiness were found.

12.6.1.3 Responsibility Preference

Table 12.3 below summarizes the association between responsibility preference and variables incorporated. It shows that responsibility preference is related to: A. Number of employees, B. Three aspects of the structural differentiation (number of divisions, sections, and, levels of authority), C. Two aspects of the administrative component (administrative ratios, and, span of control).

Table 12.3: Responsibility Preference: Explanations

Variables	Suggested Explanations
A. Size	
1. No. of Employees	No. of Employees
2. Personal Characteristics of Employees	-------
B. Structural Differentiation	
1. Horizontal Differentiation	No. of Divisions No. of Sections
2. Hierarchical Differentiation	Span of Control
D. Organizational Culture	
1. Control	-------
2. Communication	-------
3. Coordination	-------
4. Decision Making	-------
5. Management Perceptions	-------
E. Employees Attitudes	
1. Job Attitudes	-------
2. Co-workers Relationships	-------
3. Supervisory Relationships	-------

Responsibility Preference of employees differ according to the number of employees in each department, division, section, levels of authority, administrative ratios, and, span of control. The explanation to this could be that the opinions of the employees are not the same regarding the preference of responsibilities, since some like to take high responsibilities, other do not like, this is due to the fact that people differ like finger prints. This reflects the significant relationship between the responsibility preference of employees and each of the above mentioned variables.

12.6.2 Behavioural Indices: Interrelated Explanations

Having discussed the partial explanations of the relationships between our variables and the three behavioural indices, we will now concentrate on the interrelated explanations between the single associations and the behavioural index under study. By interrelated explanations we mean the relationships between any specific partial explanation of any behavioural index (as described in section (12.6.1) and any other partial explanations which has already been linked to the behavioural index under study.

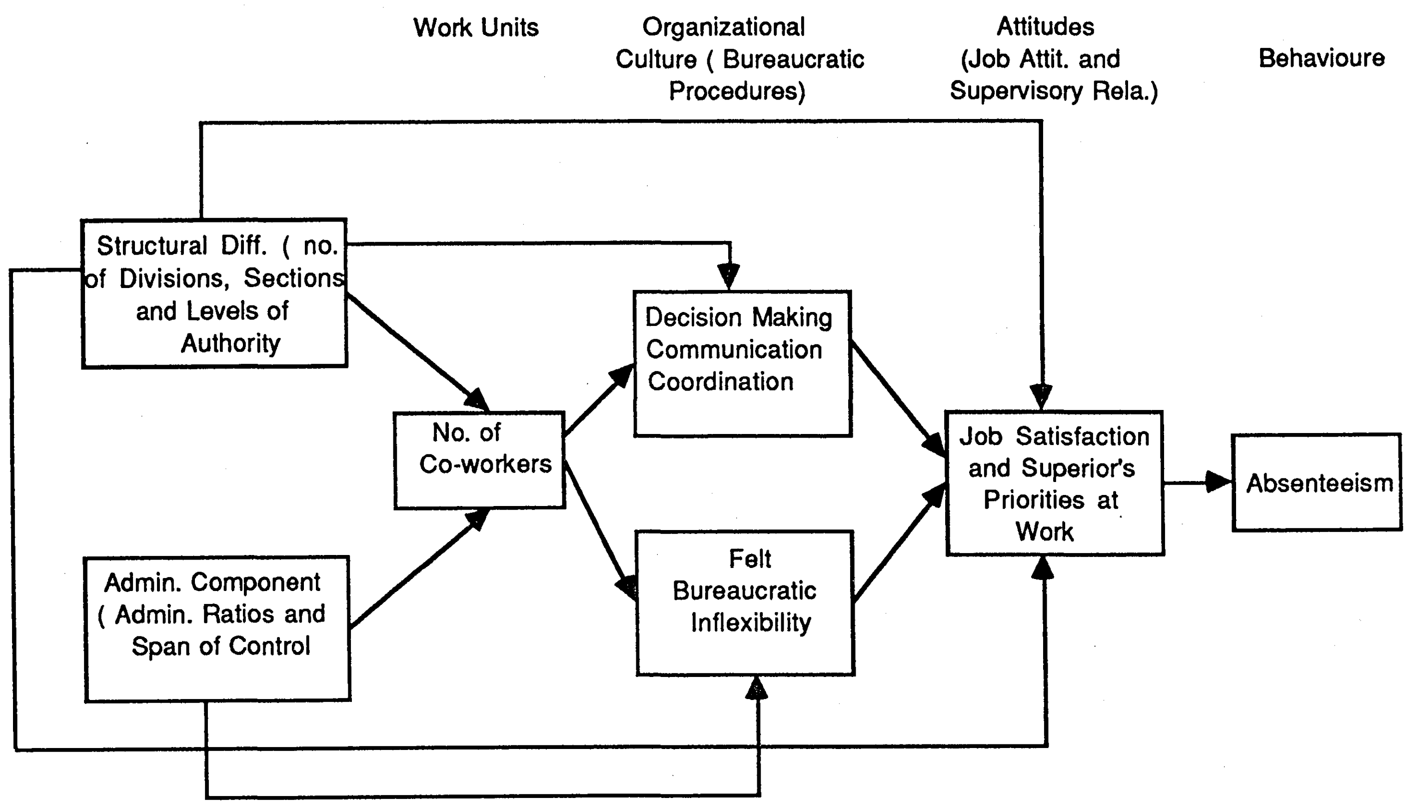
12.6.2.1 Absenteeism

Table (12.1) above suggests the following partial explanations for the absenteeism: 1. No. of employees, 2. Three aspects of the structural differentiation (no.of divisions, no. of sections, and, no. of levels of authority), 3. Two aspects of the administrative component (administrative ratios, and, span of control), and, 4. One aspect of the employees attitudes (no. of co-workers). The above mentioned explanations were found to be associated with each other.

As far as the interrelationships between number of employees and other three explanations are concerned, it could be argued that as the number of employees increases, more divisions, sections, number of levels of authority, and span of control are needed.

Attempting to interrelate these partial explanations, only those with highest number of interrelated explanations were used. Figure 12.1 below shows the proposed sets of interrelationships. Although as it is shows in this figure that the structural differentiation in terms of number of divisions, sections, and, levels of authority is directly related to the three aspects of the organizational culture, namely, decision making, communication, and, coordination, as well as to the felt bureaucratic inflexibility, and to the employee's supervisory relationships, it seems logical to incorporate both the administrative component (administrative ratios, and, span of control), and, the effects of work units (the number of co-workers) as mediating aspects.

Figure 12.1: Absenteeism: Interrelated Explanation



It might be possible to suggest that the practice of absenteeism could be linked to the employees supervisory relationships (in terms of the superior's priorities at work). On the other hand, it could be argued that the supervisory relationships might be affected by, among other things, the prevalence of certain bureaucratic procedures, i.e. formalization (in terms of the formal means of communication), the inflexible bureaucratic procedures in decision making (in terms of the awareness of the employee's work problems), as well as the coordination procedures (in terms of the time spent on coordination and supervisory tasks), and, finally with the communication system (in terms of the means of routine work communication in the organization).

The existence of such bureaucratic procedures could depend on the number of co-workers in the immediate workplace, which in turn could be designed depending on the conditions relevant to the structural differentiation (in terms of number of divisions, sections, and, levels of authority) and with the availability of the required administrative component (in terms of the administrative ratios and span of control).

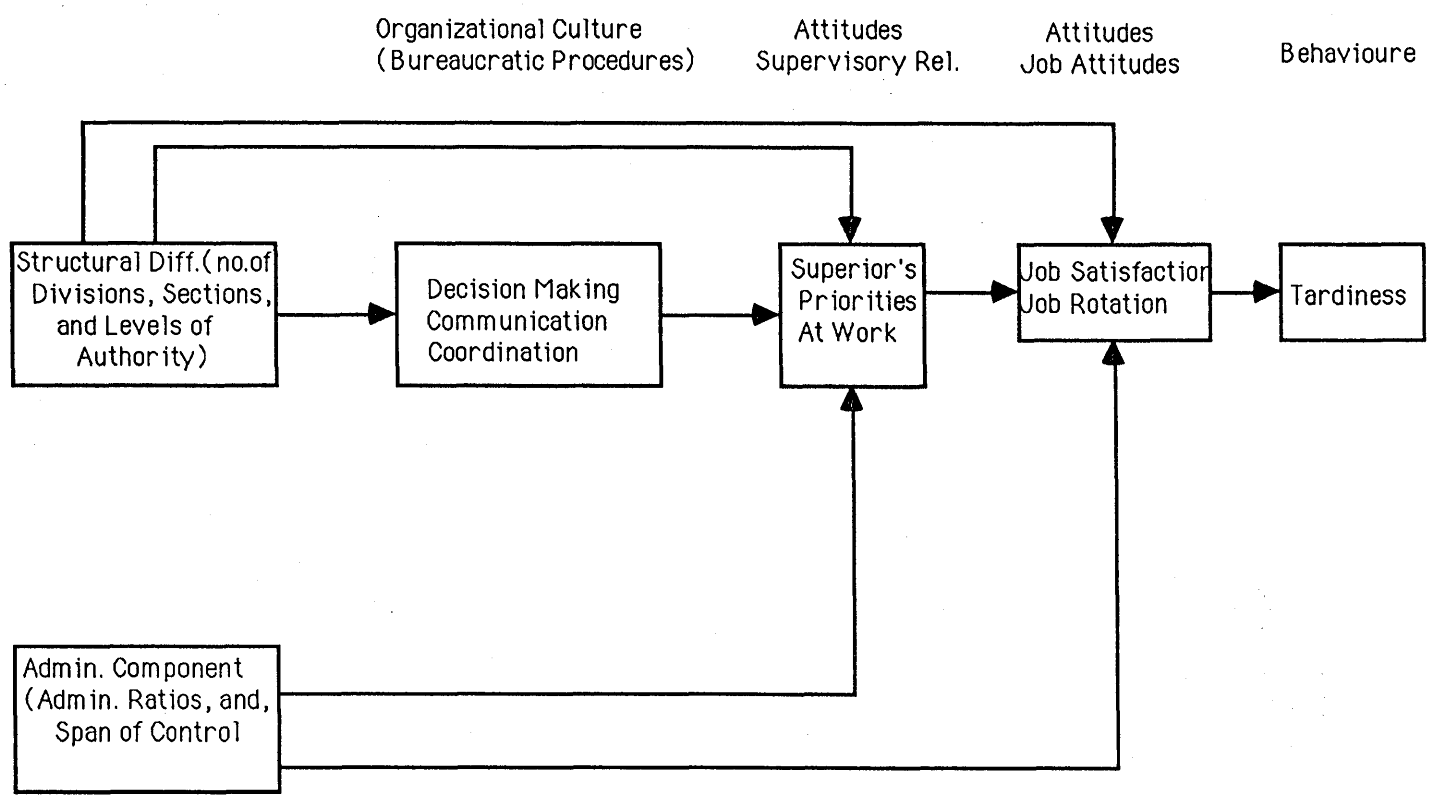
It could be argued that absenteeism might be linked to both, job satisfaction, and the supervisory relationships. Both aspects of job satisfaction and the supervisory relationships (in terms of the superior's priorities at work) might be related to the existence of inflexible bureaucratic procedures (in terms of considering the subordinates local leave cases before granting them permission to leave the workplace).

12.6.2.2 Tardiness

Table 12.2 suggests that the followings are the partial explanations for tardiness: 1. no. of employees, 2. three aspects of the structural differentiation (no. of divisions, sections, and, levels of authority), 3. two aspects of the administrative component (administrative ratios and span of control), 4. one aspect of the organizational culture (communication), and, 5. three aspects of the employees attitudes (no. of co-workers, job satisfaction, and, job rotation).

Attempting to interrelate those partial explanations, only those with highest number of interrelated explanations were used. Figure 12.2 below shows the proposed sets of interrelationships. It could be argued that, tardiness is related to the job satisfaction and job rotation which in turn related to both the structural differentiation (in terms of no. of divisions, sections, and, levels of authority) and the administrative component (in terms of the administrative ratios and span of control).

Figure 12.2: Tardiness: Interrelated Explanations

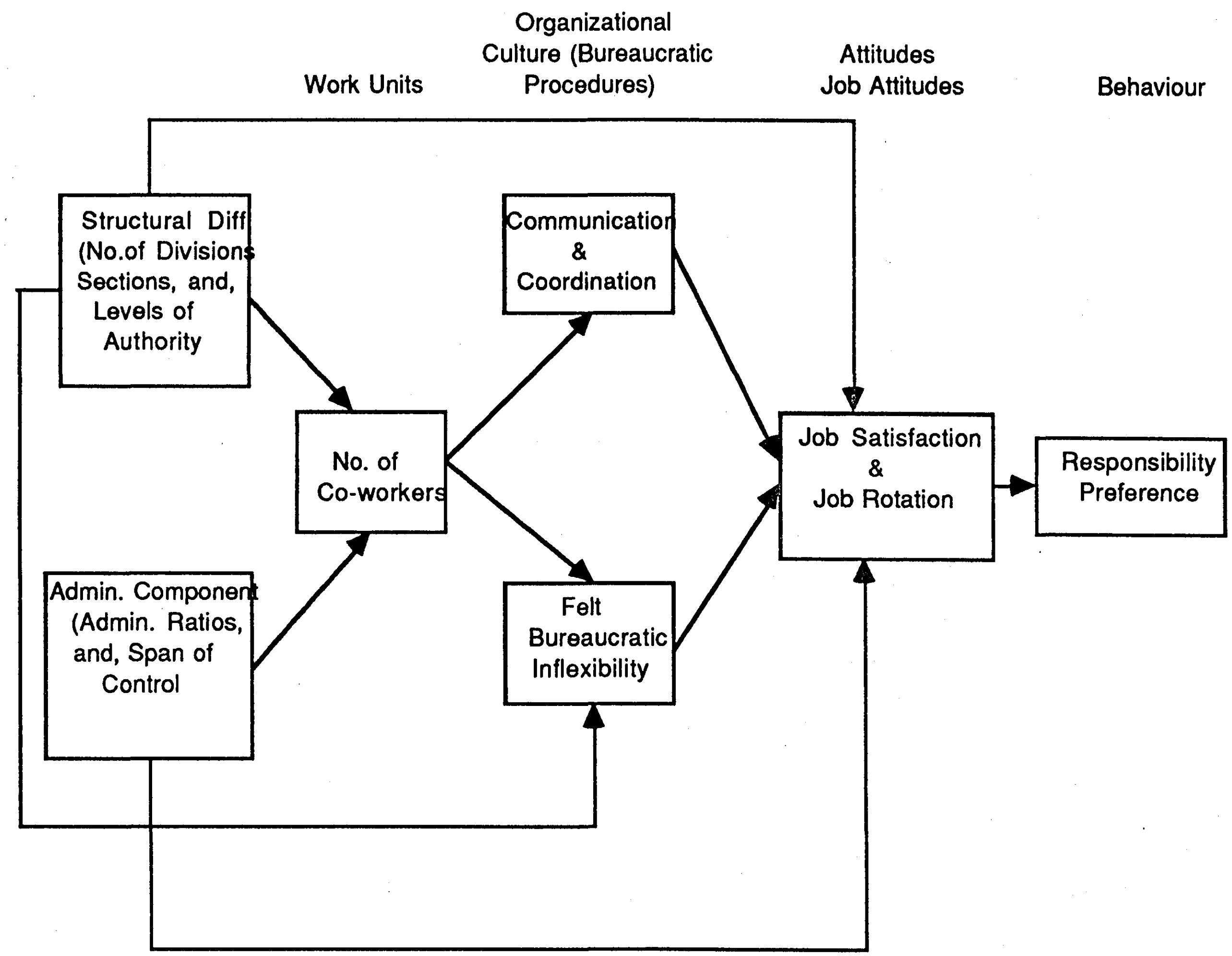


As figure 12.2 suggests, that job satisfaction and rotation could be related to the employee's supervisory relationships (in terms of the superior's priorities at work) which related with the structural differentiation and administrative component. Figure 12.2 also suggests that job satisfaction and rotation are related to the organizational culture (in terms of decisions making, communication, and, coordination systems), as a result, it could be inferred that there is a sort of interrelationship between the superior's priorities at work and the employees job satisfaction and rotation which in turn, is related to tardiness.

12.6.2.3 Responsibility Preference

Figure 12.3 below shows the proposed sets of interrelationships. Although as it is shown in figure 12.3 that structural differentiation, (in terms of number of divisions, sections, and, levels of authority), is directly related to two aspects of the organizational culture, which are, communication, and, coordination system, and also to the felt bureaucratic inflexibility, it seems logical to incorporate both the administrative component (in terms of administrative ratios, and, span of control), and to the effects of work units (the number of co-workers) as mediating aspects.

Figure 12.3: Responsibility Preference



It might be argued that , the responsibility preference (the employee's opinions towards their responsibilities) could be linked to the employees job attitudes (in terms of job satisfaction, and, job rotation). On the other hand, it could be argued that job attitudes might be affected by the prevalence of certain bureaucratic procedures, i. e. communication, and, coordination systems. The existence of such bureaucratic procedures could depend on the number of co-workers in the immediate workplace, which intern could be designed depending on the conditions relevant to the structural differentiation (in terms of number of divisions, sections, and, levels of authority) and with the availability of the required administrative component (in terms of the administrative ratios, and, span of control). Therefore, the responsibility preference might be linked to the job attitudes (in terms of job satisfaction and lob rotation).

12.7 The Relationships Between Size and the Selected Characteristics: Conclusions and Suggestions

Having explored the partial and the interrelated explanations of our behavioural indices, we will concentrate on developing an overall model for our empirical explanations which could be compared with the model presented in chapter 7. Following is the presentation of this model.

12.7.1 The Model

Before presenting the model, we will have to emphasize the following aspects:

A. Size is related to the following aspects:

1. Structural Differentiation: Size is related to the two aspects of the horizontal differentiation (no. of divisions, and, sections), and, one aspect of the hierarchical differentiation (no. of levels of authority).

2. Administrative Component: Size is related to the three aspects of the administrative component (s.o.\sub prof.+L, sub prof.\L, and, span of control).

3. Organizational Culture: Size is related to control aspect (in terms of the responses of the superiors for application for permission, responses of the superiors for the lateness cases, and the lateness case's time allowed); to the communication aspect (in terms of the means of routine work communication, and means of non routine work communication); to the decision making (in terms of the awareness of work activities, and awareness of work problems); and finally, to the management perception's aspects (in terms of the authority available

to the senior officials, the application of rules and regulations, and, the social influence).

4. Employees Attitudes: Size is related to job attitudes (in terms of job satisfaction and job rotation), to the co-workers relationships (in terms of no. of co-workers, no. of close friends, and, frequency of meeting close friends), and, finally, to the supervisory relationships (in terms of the superior's priorities at work).

5. Employees Behaviour: Size is related to absenteeism (in terms of absenteeism with and without permission, tardiness, and, responsibility preference).

B. Structural Differentiation is related to the following aspects:

1. Administrative Component: Structural differentiation is related to three aspects of the administrative component (s.o./sub prof. +L, sub prof./L, and span of control).

2. Organizational Culture: Structural Differentiation is related to four aspects of the organizational culture, it is related to communication aspects (in terms of the responses of the top management in regard to the routine and non routine work communication), to the management perceptions (in terms of the application of rules and

regulations), to the coordination aspects (in terms of the time spent on coordination and supervisory tasks), and finally, to the decisions making aspects (in terms of the awareness of work problems).

3. Employees Attitudes: Structural Differentiation is related to three aspects of the employees attitudes, firstly, to the job attitudes (in terms of the job rotation), and secondly, to the co-workers relationships (in terms of the no. of the co-workers, no. of close friends, and, frequency of meeting close friends), and thirdly, to the supervisory relationships (in terms of the relationships between the superiors and the subordinates).

4. Employees Behaviour: Structural Differentiation is related to three aspects of the behaviour of the employees, to the absenteeism (in terms of the absenteeism with and without permissions), to the tardiness (in terms of the lateness time allowed), and, to the responsibility preference (in terms of the employees opinions towards their responsibilities).

C. Organizational Culture is related to the following aspects:

1. Employees Attitudes: Organizational Culture is related to the three aspects of the employees attitudes, namely, to the job attitudes (in terms of the job

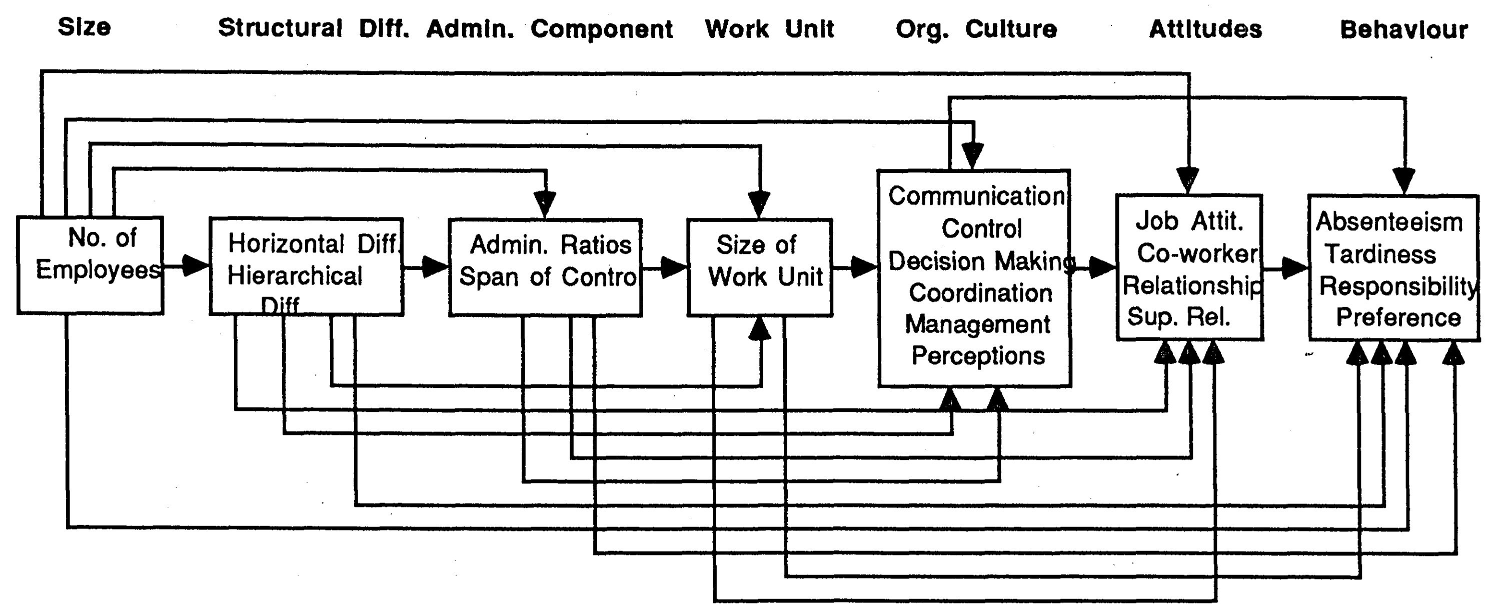
satisfaction), to the co-workers relationships (in terms of the no.of co-workers, no. of close friends, and, frequency of meeting close friends), and, to the supervisory relationships (in terms of the relationships between the superiors and the subordinates, and the superior's priorities at work).

2. Employees Behaviour: Organizational culture is related to two aspects of the employees behaviour, to the responsibility preference (in terms of the employees opinions towards their responsibilities), and, to the tardiness (in terms of the lateness time allowed).

D. Employees Attitudes is related to the employees absenteeism (in terms of the absenteeism with and without permissions), to the tardiness (in terms of the lateness time allowed), and to the responsibility preference (in terms of the employees opinions towards their responsibilities).

Bearing in mind all these aspects and in the light of our empirical findings, we present the model in Figure 12.4 below.

Figure 12.4: Size and the Selected Organizational Characteristics



12.7.2 The Partial Relationships: A Test of Theoretical Model and Implications

Attempting to establish an overall associations between Size and the selected characteristics, the theoretical model which is presented in chapter 7 (Figure 7.4), suggests fifteen relationships. These relationships were categorized into three groups, namely, A. Structural relationships, which include: 1. Size-Structure, 2. Size-Administrative Component, and, 3. Structure-Administrative Component; B. Behavioural relationships which include: 1. Size-Attitudes, 2. Size-Behaviour, 3. Size-Organizational Culture, 4. Attitudes-Behaviour, 5. Attitudes-Organizational Culture, 6. Behaviour-Organizational Culture; C. Structural Behavioural relationships, which include: 1. Structure-Attitudes, 2. Structure-Behaviour, 3. Structure-Organizational Culture, 4. Administrative Component-Attitudes, 5. Administrative Component- Behaviour, and, 6. Administrative Component-Organizational Culture. On the other hand, our empirical model of explanations suggests four categories of partial explanations rather than three. These are: A. Structural Relationships which include: 1. Size and Structural Differentiation, 2. Size and Size of work Unit, 3. Size and Organizational Culture, 4. Structural Differentiation and Size of Work Unit, 5. Structural Differentiation and Organizational Culture, and, 6. Size of Work Unit and Organizational Culture; B. Structural Administrative Relationships which include: 1. Size and Administrative Component, 2. Structural Differentiation and Administrative Component, 3. Size of Work Unit and Administrative Component, 4. Administrative Component and Organizational Culture; C. Structural Behavioural Relationships which include: 1. Size and Attitudes, 2. Structural Differentiation and Attitudes, 3. Size and Behaviour, 4. Structural Differentiation and Behaviour, 5. Size of Work Unit and Attitudes, and, 6. Size of Work Unit and Behaviour; D. Administrative Behaviour Relationships which include: 1. Administrative Component and Attitudes, 2. Administrative Component and Behaviour; and, E. Cultural Behaviour Relationships which include: 1. Organizational Culture and Attitudes, 2. Organizational Culture and Behaviour, and, 3. Attitudes and Behaviour.

The major difference between the two sets of explanations is that the size of work unit which has been suggested in the theoretical model as an aspect of the employees's attitudes, reflecting on their co-workers relationships, has been used in the empirical model as a distinct structural variable.

Summing up the argument regarding the above mentioned findings, the study emphasizes the followings:

1. The increase in the number of employees in an organization might lead to an increase in the structural units (number of divisions, and sections). That means, the increase in the size of an organization needs to have more divisions of labour and to create new units. But as the organization grows more in size, the size of its units will increase. This situation would affect the administrative component and might change the size of the work units and create a level of bureaucratic inflexibility which might

have the effect on the employees attitudes and behaviour as a result.

2. The increase in the number of employees in an organization might lead its structure to be more elaborated and its tasks to be more specialized. This would result in putting more emphasize on coordination. Which means the organization should use more effective coordination devices, such as, by concentrating on more behaviour formalization to coordinate by the standardization of work processes, by creating a large hierarchy to coordinate by direct supervision, by applying more effective control systems to coordinate by output standardization. This situation might create a level of bureaucratic inflexibility which would affect the employees attitudes and behaviour.

3. The increase in the number of employees in an organization, might lead its behaviour to be more formalized. In other words, the increase in the size of an organization, would lead its behaviour to be more predictable and more repetitive, which would affect the employee's attitudes and behaviour in regard to the job satisfaction and job rotation as well as absenteeism and tardiness.

4. The formalized and centralized structure is a result of (among others) the external environment. That mean, when the external environment such as, the suppliers of the spare parts, or the owners of the organization (Government), practice a strong control on the organization, top management would tend to keep the decision-making powers in their hands through greater reliance on

the rules and regulations for internal control. This situation again would create a level of bureaucratic inflexibility which might affect the employees attitudes and behaviour.

Therefore, the Pakistan International Airlines might like any other Airlines, in our opinion, is a "Machine Bureaucracy" as one of the five configurations of Mintzberg (1983), (discussed in chapter 2), with specialized and routine operating tasks, with formalized procedures in the operating core, with formalized communication throughout the organization, with large structural units, with centralized power for decision-making, and, with an elaborated administrative structure.

Most of the studies which examined the impact of size of an organization on its management characteristics (discussed in chapter 4) depend on the contingency theory (situational approach). This approach has been subject to considerable methodological and analytical criticism, such as by Bird and Schoonheven (1981), and by McGuire (1982).

In fact, contingency theory has some face validity and appears supported by common sense at a general level, and yet the fruits of its application in specific cases appear to be limited. The methodological and analytical criticisms are summarized in the following:

1. Contingency theory is a good but limited prescriptive guide for the practitioner when it comes to making decisions about structure, which have a real but limited contribution to make to organizational performance.

2. Contingency theory negate one of the basic attributes of good theory, which is to provide generalization.

3. Contingency theory leaves quite a lot to be desired as an analytical basis for understanding the dynamics, activities and outcomes associated with organizations.

4. Lack of clarity, i.e. in order to be more effective, organizational structures should be appropriate to the work performed and/or to the environmental conditions facing the organization. Although the overall strategy is reasonably clear, the substance of the theory is not clear.

5. Contingency relations as indicators, i.e. when contingency theorists assert that there is a relationship between two variables (dimensions of technology and structure for example) when predicts a third variable (organizational effectiveness), they are stating that, an interaction exists between the first two variables.

6. Because of the lack of clarity, theoretical statements also fail to provide any clues the specific form of interaction intended.

7. The operational and computational procedures that researchers tend to use impose assumptions on an already imprecise conceptual framework. Because of the tendency to rely on the general linear model and correlational procedures, the relationships studied within the contingency framework are typically assumed to be linear.

12.8 Suggestions For Future Research

Based on our empirical findings presented in this study, we will point out the areas in which more research are needed.

1. It is apparent that generalization of our findings to other organizations in Pakistan or even other countries are difficult. We think it depends on the existence of similar settings, therefore, we suggest that there is a need for further explorations regarding the cultural, economic, and, social factors when investigating the organizational characteristics in similar settings specially when investigating the behavioural characteristics.

2. As our findings suggest that there are some relationships between the employee's attributes and the organizational characteristics, we suggest that further investigation on those attributes would be useful specially when investigating its effects on the attitudes and the behaviour of the employees.

3. Our findings indicate that there are some relationships between organizational culture and organizational characteristics, we suggest that the interrelationships among these variables are quite complex and need further investigation especially for feedback effects.

4. Although all the measures of our selected variables have been adopted by students of organization, we suggest that further measures as well as modifications of the existing measures are needed specially when investigating organizational culture, employee's attitudes and behaviour.

Bibliography

Al-Eshaiker, A.H., "Size and Organizational Structure", Unpublished M.B.A. Thesis, Baghdad University, 1983, Baghdad, Iraq.

Al mujahid, S , "Pakistan, History", Published in" The Far East and Austrasia", Twenteth Edition, Europa Publications Ltd, 1989.

Aldrich, H.,"Technology and Organizational Structure, A Re-examination of the Findings of the Aston Group", Administrative Scince Quarterly, Vol.17, 1972, pp.26-43.

Anderson, T. and S. warkov, "Organizational Size and Functional Complexity: A Study of Administration in Hospitals", American Social Review, Vol. 26, 1961, pp.23-28.

Argyris, C. "Understanding Organizational Behaviour", Homewood, Illinois: Dorsey, 1960.

Arthur, G. Bedian, "Organizations: Theory and Analysis", Hinsdale 11, Dryden Press, 1980, p.4.

Asumi, K., "Organizational Systems", University of Wisconsin, 1972.

Bacharach, Samuel B. and Michael Alken, "Structural and

Process Constrains on influance in organization: A level specific analysis", Administrative Scince Quarterly, Vol. 21, Dec. 1976, pp. 623-42.

Behling, O. and Schriesheim, C., "Organizational Behaviour; Theory, Research and Application", The Ohio State University, 1976.

Blau, P. M., "Interdependence of Hierarchy in Organizations", Social Science Research, Vol. 1,1972, pp. 1-24.

Blau, P. M., W. V. Heydebrand and R. E. Stauffer, "The structure of Small Bureaucracies", American Sociological Review, Vol. 31, 1966, pp. 179-91.

Blau, P. M. and R. A. Schoenherr, "The Structure of Organizations", New York: Basic Books, 1971.

Blau, P.M., "On the Nature of Organizations", New York : Wiley, 1974.

Blau, P.M. and W.R. Scott, "Formal Organizations: A Comparative Approach", London: Routledge and Kegan Paul, 1963.

Blau, Peter M., "A Formal Theory of Differentiation in Organizations", American Sociological Review, Vol. 35, 1970, pp. 201-18.

Bowey, A.M., "The Sociology of Organizations", London;

Hodder and Stoughton, 1976.

Campbel, F. L. and R. L, Akers, "Organizational Size, Compexity, and the Administrative Component in Occupational Associations", Sociological Quarterly, Vol. 1, 1970, pp. 435-451.

Caplow, T., "The Effects of Increasing Size on Organizational Structure in Industry", Proccedings of the Third International Congress of Socoilogy, 1956.

Caplow,T., "Principles of Organization", Harcourt, Brace and world, inc. New York, 1964.

Champion, D.J., "The sociology of organizations", McGRaw - Hill Books Compony, 1975.

Chava Nachmias and David Nachmias, "Research Methods in the Social Sciences", New York, St Martin's Press, 1981.

Child, J., "Organization Structure, Environment and Performence: The Role of Strategic Choice" Sociology; Vol. 6, 1972, pp. 1-22.

Child, J., "Organization", Harper and Row Publishers, London, 1984.

Child, J., "Strategies of Control and Organizational Behaviour" Administrative Scince Quartarly, Vol., 1973 b, 18, pp. 1-17.

Child, J., "Predicting and Underistanding Organization Structure" Administrative Scince Quartarly; Vol.18, 1973 a, pp. 168-85.

Clark, P. A.,"Organizational Design: A Review of Key Problem", Administration and Sociology, Vol. 7, No. 2, 1972, pp. 213-56.

Crozier, M., "The Problem of Power", Social Research,Vol. 40, 1973, PP. 211-28.

Daft, R.L., "Organization theory and design", west publishing compony, 1983.

Dewar, R. and J. Hage, "Size, Technology, Complexity, and Structural Differentiation: Toward a Theoretical Synthesis", Administrative Science Quarterly, Vol. 23, 1978, pp.111-136.

Drake, R.I. and P.S. Smith, "Behavioural Science in Industry", London , McGraw-Hill Co., 1973.

Dubin, R., "The World of Work", Englewood, Cliffs, N.J.: Prentice-Hall, 1958.

Eldridge, J. E. T. and A.D. Cromble, "A Sociology of Organization", Allen and Unwin, London, 1974.

Etzioni, A., "Modern Organizations", Englewood, Cliffs, N.J: Prentice-Hall, 1964.

Evan, William M., "Cultural and Organizational System", Organization and Administration Science, Vol. 5, 1974-5, pp. 1-16.

Farmer, B. H., "Pakistan, Physical and Social Geograhpy", published in "The Far East and Australasia", Twenteth Edition, Europa Publications Ltd., 1989.

Galbraith, J., "Designing Complex Organizations", Addison-wesely publishing compony, Reading, 1973.

Gibson, J.L., J.M. Ivancevich, and J.H. Donnelly, "Organizations: Behaviour, Structure, Process", Dallas, Taxas: Business Publications, Inc. Revised Edition, 1976.

Gilani, I., "Pakistan, Economy", Published in "The Far East and Austrasia", Twenteth Edition, Europa Publications Ltd., 1989.

Goldman, p., "Size and Differentiation in Organizations: A Text of a Theory", Pacific Sociological Review, vol.16, 1973, pp. 89-105.

Graves, D., "Corporate Culture", Frances Printer, London, 1986.

Greiner, L.E., "Evolution and Revolution as Organizations Grow", Harvard Business Review, Vol. 50, 1972, pp.37-40.

Haas, E.J., R. Hall, and N. Johnson, "Size of the Supportive Component in Organizations: A Multi-Organizational Analysis", Social Forces, Vol. 42, 1963, pp.9-17.

Hage, J., "An Axiomatic Theory of Organizations", Administrative Scince Quarterly, Vol. 10, 1965, pp. 289-320.

Hair, J. F. et al, "Multivariate Data Analysis", Macmillan Publishing Co., New York, 1984.

Hall, R.H., "Organizations: Structure and Process", London: Prentice-Hall International, inc., 1974.

Hall, R.H.; E.J. Haas, and N.Johnson, "Organizational Size, Complexity and Formalization", Administrative Scince Quarterly, 1967, pp. 903-912.

Hall, Richard H., "Intraorganizational Structural Variation: Application of the Buroacratic Model", Administrative Scince Quartarly, Vol. 7, March 1962, pp. 295-308.

Hawly, A., W. Boland, and M. Boland, "Population Size and Administration in Institutions of Higher Education", American Sociological Review, Vol. 30, 1965, pp. 252-255.

Hickson, David, J.et al.,"The Culture-Free Context of

Organization Structure" ,Sociology, Vol. 8, 1974, pp. 1-22.

Hinings, C.R. and A. Bryman, "Size and the Administrative Component in Churches", Human Relations, Vol. 27, 1974, pp. 457-475.

Hinings, C.R. and B.D. Foster, "The Organization Structure of the Churches", Sociology, Vol.7, 1973, pp. 93-106.

Horvath, Dezso, K. Azumi, D. J. Hickson and C. J. Mcmillan, "The Cultural Context of Organizational Control: An International Comparison", International Studies of Management and Organization, Vol. 6, No. 3, 1976, PP. 60-86.

Indik, B.P., "Some Effects of Organization Size on Member Attitude and Behaviour", Human Relations, Vol. 16, 1963, pp. 369-384.

Indik, B.P., "The Relationship Between Organization Size and the Supervision Ratio," Administrative Science Quarterly, Vol. 9, 1964, pp.301-312.

Indik, B.P. and S.B. Seashre, "Effects of Organization Size on Member Attitudes and Behaviour", Ann Arbor: University of Michigan, Survy Research Centre of the Institute of Social Research, 1961.

Indik, B.P., "Organization Size and Member Participation: Some Empirical Tests of Alternative Explanations", Human Relations, Vol. 18, 1965, pp.339-350.

Ingham, G.K., "Size of Industrial Organization and Worker Behaviour", Cambridge: Cambridge University Press, 1970.

Johnson, S.W. and J. E. Stinson, "Management Today and Tomorrow" Ohio University, 1978.

Kasarda, J. D., "The Structural Implications of Social System Size: A Three Level Analysis" American Sociological Review, Vol. 39, 1974, pp. 19-28.

Bates, J. "Alternatives Measure of the Size in Profit, Business Savings and Investment in United Kingdom 1920-1962", London, George Allen and Unwin, 1965, pp. 133-149.

Katz, D. and R.L. Kahn, "The Social Psychology of Organizations", New York: Willy, 1966.

Kennedy, C.H., "Buearucracy in Pakistan", Oxford University Press, 1987.

Kerr, W.A.; G.J. Koppelmeier, and J.J. Sullivan, "Absenteeism, Turnover, and Moral in a Metal Fabrication Factory", Occupational Psychology, Vol. 25, 1951, pp.50-

55.

Khan, R.; D.M.Wolfe, and P.R. Quinn et al, "Organizational Stress", New York: Wily, 1964.

Kimberly, John R., "Organizational Size and the Structuralist Perspective Areview, Critique and Proposal", Administrative Scince Quartarly, Vol. 21, 1976, PP. 571-97.

Klatzky, S.R., "Relationship of Organizational Size to Complexity, and Coordination", Admistrative Science Quarterly, Vol. 15, 1970, pp. 428-438.

Kroeber, A.L. and Talcott Parsons ,"The concepts of Culture and of a Social System", American Socioloical Review, Vol. 23, 1958, PP. 582-83.

Kurian, G.T, "Encyclopedia of the Third World", third edition, volum II, fact on file, inc. U.S.A., 1987.

Lauter G. Peter,"Sociological Cultural and Legal Factors Impeding Decentralization of Authority in Developing Countries", Academy of Management Journal, Vol. 12, 1969, pp. 367-78.

Lauter, G Peter, "Advanced Management Processes in Developing Countries: Planning in Turky", California Management Review, Vol. 13, No. 3, Spring 1970, pp. 7-12.

Mackenzie, K. D. "Organizational Structures", AHM Publishing Corporation, Illinois, U.S., 1978.

March, J. G. and H. A. Simon, "Organizations", New York: Wiley 1958.

Meltzer, L.and S. Salter,"Organizational Structure and the Performance and Job Satisfaction of Physiologists", Administrative Scocial Research, Vol. 27, 1962, pp. 351-362.

Meyer, M.W., "Size and the structure of Organizations: A Causal Analysis", Administrative Social Research, vol.37, 1972, pp.434-441.

Meyer, M.W., "Structures, Symbols and Systems", Little, Brown and Company, Boston, 1979.

Mintzberg, H., "Structure in Five-Designing Effective Organizations", Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1983, P. 2.

Mintzberg, H., "The structuring of organizations", Prentice-Hall, inc. Englwood Cliffs, 1979.

Nath, R., "A Methodological Review of Cross-Cultureal Management Research", InternationalSocial Science Journal, Vol. 20, 1968, PP. 35-62.

Negaudhi, A.R., "Asvanced Management Know-How in

Underdeveloped Countries", California Management Review, Vol. 10, 1969, pp. 53-60.

New bould, G.D. and K.W. Wilson, "Alternative Measures of Company Size: A note for Researchers", Business Finance and Accounting, vol. 4, 1977, pp.131-132.

Parsons, T., "The Social System", london, Routledge and Kegan Paul Ltd , 1951.

Paulson, S. K., "Organizational Size, Technology, and Structure: Replication of a Study of Social Service Agencies Among Small Retail Firms", Academy of Management Journal, Vol. 23, No. 2, 1980, pp. 341-347.

Pennings, Johannes, "Measures of Organization Structure: A Methodological Not", American Journal of Sociology: Vol. 79, Nov. 1973, pp. 686-704.

Perrow, C.,"Organizational analysis of Organizations" American Sociology Review, Vol. 32, 1970, pp. 194-208.

PIA, " Basic Facts", Pakistan International Airlines, 7th Edition, 1987.

Pondy, L.R., "Effects of Size, Complexity, and Ownership on Administrative Intensity", Administrative Scince Quarterly, Vol.14, 1969, pp.47-60.

Porter, L.W. and E.E. Lawler, "Properties of

Organization Structure in Relation to Job Attitudes and Job Behaviour", Psychological Bulletin, Vol. 64, 1965, pp. 23-51.

Price, J . L , "Handbook of Organizational Measurement", Lexington, Massachusetts: D.C. Heath and Co., 1972.

Pugh, D. et al.,"Dimensions of Organizational Structure" Administrative Science Quartarly; Vol. 13, 1968, pp. 65-106.

Pugh, D., S., D. J. Hickson, Christopher R. Hinnings and Christopher Turner, "The Context Of Organization Structures" Administrative Scince Quartarly, Vol. 144, 1968, pp. 91-114.

Pugh, D.S.; D. J. Hickson,; C.R. Hinings; and C. Turner, "The Context of Organization Structures", Administrative Scince Quarterly, vol.14, 1969, pp.91-114.

Pugh, D.S. and Hining, C.R.,"Organizational Structure", Saxon House, England, 1976.

Pugh, D.S., "Organization theory", penguin Book Ltd., England, 1971.

Reitz, J.H., "Behaviour in Organizationa", Homewood: Illinois, Richard D. Irwin, Inc., 1977.

Rodney E. Schneck, "The Structure of Work Organizations Across Studies", Academy of Management Journal, Vol. 16, 1973, PP. 555-69.

Rushing, W.A.,"The Sffects of Industry Size and Division of Labour on Administration". Administrative Scince Quarterly, Vol. 12, 1967, pp. 273-295.

Sawyer, J., "Dimensions of Nations:Size, Wralth and Politics", American Journal of Sociology, Vol. 72, 1967, PP. 145-72.

Schein, E.H., "Organizational Psychology", Englewood, Cliffs, N.J.: Prentice-Hall, inc. Second Edition , 1970.

Shimmin, S., "Behaviour in Organizations: Problems and Prospectives" Journal of Occupational Phychology, Vol. 45, 1971, pp. 13-26.

Sofer, C., "Organizations in theory and practice", Heinemann Educational Books, London, 1972.

Stanford Labovits and Robert Hagedorn, "Introduction to Social Research", New York: McGraw-Hill, 1971.

Stone, E. F., "Research Methods in Organizational Behaviour" , Santa Manica, 1978.

Sutton, Richard L., "Cultural Context and Chang Agent Organizations", Administrative Science Quarterly, Vol. 19, 1974, pp. 47-62.

Talacchi, S., "Organization Size, Individual Attitudes and Behaviour: An Empirical Study", Administrative Science Quarterly, Vol. 5, 1960, pp. 389-420.

Taylor, P. Dunning, D., "Statistics for Business", Polytech publishers Ltd, England, 1977.

The Europa Year Book, "Aworld Survey", Volum II, Europa Publications Ltd., 1988.

Thomas, E.J., "Role Conception and Organization Size", American Sociological Review, 1959.

Williams, Lawrence K.William F. Whyte and Charless S. Green, "Do Culture s Differences Affect Workers Attitudes?," Industrial Relations, Vol. 5, 1966, pp. 105-17.

Woodward, J., "Industrial Organization: Theory and Practice" , London: Oxford University Press, 1965.

Worthy, J., "Organizational Structure and Employee Moral", American Sociological Review, Vol. 15, 1950, pp. 169-179.

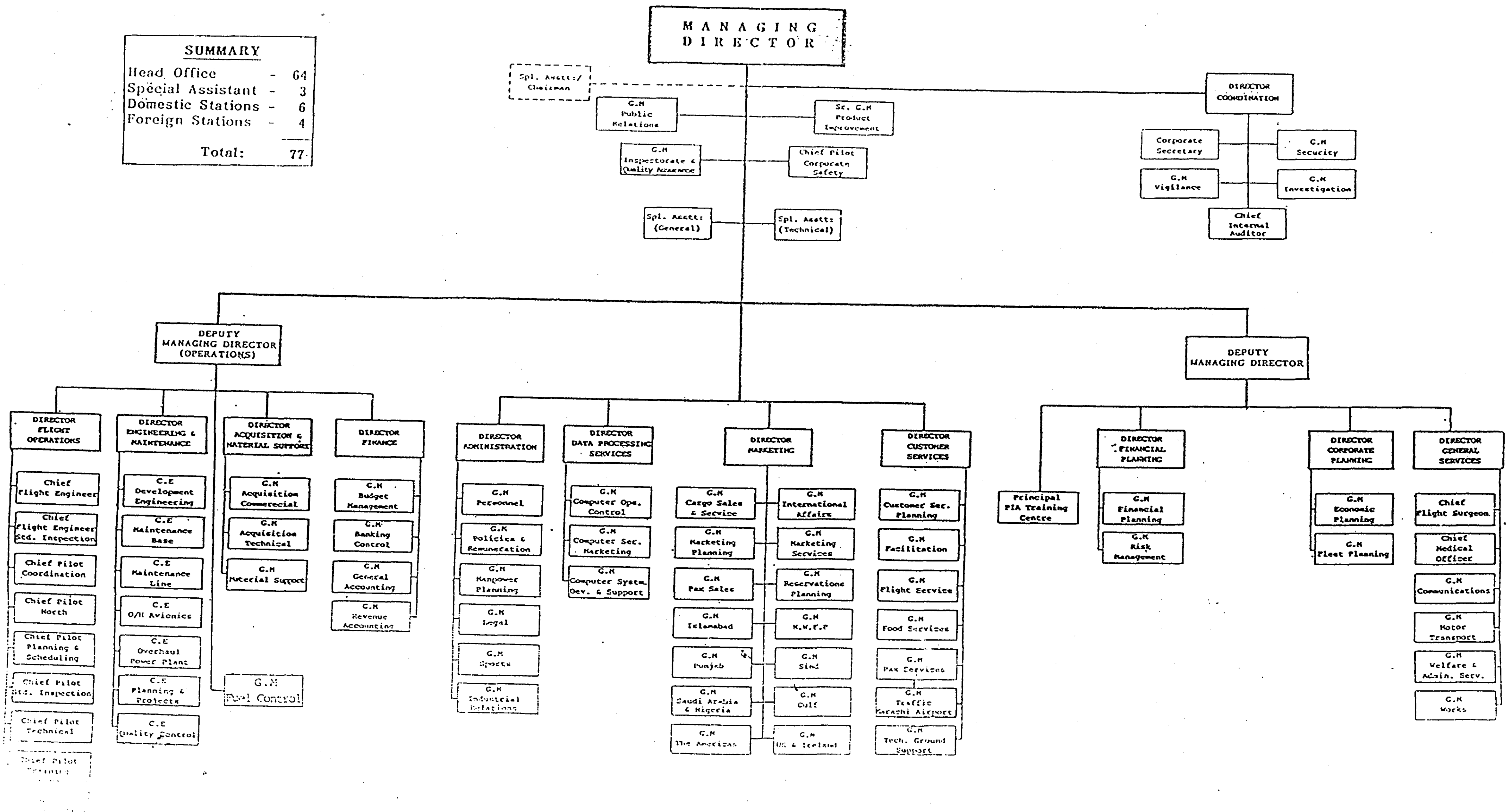
Yinger, J. Milton, "Contraculture and Subculture", American Sociological Review, Vol. 25, 1960, PP. 625-35.

Appendix I

ORGANIZATIONAL STRUCTURE UPTO GENERAL MANAGER LEVEL

SUMMARY

Head Office	-	64
Special Assistant	-	3
Domestic Stations	-	6
Foreign Stations	-	4
Total:		77



Appendix II

Dear Sir

Kindly be informed that as part of my pursuit for the degree of Ph.D. in the field of management in the University of Glasgow at United Kingdom, this questionnaire is designed with a purpose to utilize it as a major data collection technique.

Since the purpose is to consider the facts and figures only for research purpose, the secrecy will be maintained strictly.

Every possible assistance in this respect will be appreciated.

With best regards.

Yours Sincerely

A.H.AL-Eshaiker
Management Studies Dept.
Glasgow University, Glasgow,
U.K.

Questionnaire I

Q.1. Age:

Less than 30 Years	....
Between 30-34 Years	....
Between 35-39 Years	....
Between 40-45 Years	....
Above 45 Years	....

Q.2. Sex:

Male	....
Female	....

Q.3. Marital Status:

Single	....
Married	....
Widow	....
Divorced	....

Q.4. Place of Birth:

Village	....
Town	....
Province	....

Q.5. Qualification:

Diploma ....

Bachlor's Degree ....

Postgraduate ....

Q.6. Your Present Job (Please indicate years of work in present job)

Q.7. Previous Job (if any) ....

(Please indicate years of work in last one)

Q.8. Please indicate number of employees under your direct supervision.........................

Q.9. How do you consider your relationship with them? Is it?:

(A) very good ....

(B) good ....

(C) not so good ....

(D) do not know ....

Q.10. In which way do the employees under your supervision ask for a permission to leave the workplace? Do they:

(A) apply in writing ....

(B) ask Verbally ....

(C) do it by other means ....

(D) do not know ....

Q.11. When you grant a permission to an employee to leave the workplace for his particular reason, do you do it? :

(A) against his local leave. ....

(B) without considering his local leave. ....

(C) by keeping a note in your record. ....

(D) do not know ....

Q.12. Do you usually ask for a written explanation from an absent or late employee?

(A) Yes ....

(B) No ....

(C) Consider other factors ....

(D) Do not know ....

Q.13. If you answered Q. 12 affirmatively, in which of the following 'late-to-work' cases would you ask for a written explanation:

(A) Less than 15 minutes ....

(B) 15-30 minutes ....

(C) 30-45 minutes ....

(D) 45-60 minutes ....

(E) More than one hour ....

(F) Do not know ....

Q.14. How much time do you usually spend on coordination, control, and other daily supervisory tasks?

(A) Less than an hour ....

(B) Less than two hour ....

(C) More than two hours ....

(D) Not every day ....

(E) Do not know ....

Q.15. To what extent are you aware of problems facing the juniors of your staff?

(A) Aware of all ....

(B) Aware of some ....

(C) None ....

Q.16 To what extant are you aware of daily work activities in your division?

(A) Aware of all ....

(B) Aware of some ....

(C) None ....

Q.17. How would you assess the association between your section/ department and the top management?

(A) Always in touch with top management. ....

(B) Only with important matters. ....

(C) Only when your section/ department involved. ....

(D) Not in touch at all ....

(E) Do not know ....

Q.18. To what extent are you aware of the activities of other sections/ departments?

(A) Aware of all ....

(B) Aware of some ....

(C) Not aware ....

Q.19. Which of the means of communication do you usually use when contacting the top management in connection with routine work?

(A) Letters ....

(B) Telephone ....

(C) Other verbal means ....

(D) Do not know ....

Q.20. Which of the means of communication do you usually use when contacting the top management in connection with non-routine work?

(A) Letters ....

(B) Telephone ....

(C) Other Verbal means ....

(D) Do not Know ....

Q.21. Do you think you are having enough authority in order to accomplish your work properly?

(A) Yes ....

(B) No ....

(C) Do not know ....

Q.22. How would you consider the response of the top management to your contact concerning routine work?

(A) Reasonable ....

(B) Not reasonable ....

(C) Do not know ....

Q.23. How would you consider the response of the top management to your contact concerning non-routine work?

(A) Reasonable ....

(B) Not reasonable ....

(C) Do not know ....

Q.24. In your opinion, is the most important factor which leads to the progress of an employee in your section/department?

(I) Application of rules and regulations

(a) Strongly Agree ....

(b) Agree ....

(c) Uncertain ....

(d) Disagree ....

(e) Strongly Disagree ....

(II) Personal initiatives

(a) Strongly Agree ....

(b) Agree ....

(c) Uncertain ....

(d) Disagree ....

(e) Strongly Disagree ....

(III) Social influence

(a) Strongly Agree ....

(b) Agree ....

(c) Uncertain ....

(c) Disagree ....

(d) Strongly Disagree ....

(IV) Efficiency

(a) Strongly Agree ....

(b) Agree ....

(c) Uncertain ....

(d) Disagree ....

(e) Strongly Disagree ....

(V) Others (Please specify) ....

Questionnaire II

Q.1. Age:

Less than 30 Years	....
Between 30-34 Years	....
Between 35-39 Years	....
Between 40-45 Years	....
Above 45 Year	....

Q.2. Sex:

Male	....
Female	....

Q.3. Maritial status

Singel	....
Married	....
Widow	....
Divorced	....

Q.4. Place of birth

Village	....

Town ....

Province ....

Q.5. Qualifications

Bellow Secondary Shool ....

Secondary Shool ....

Diploma ....

Bachlor's degree ....

Higher Degree ....

Q.6. Your present job ....

(Please indicate years of work in the present job)

Q.7. Previous jobs (if any) ....

(Please indicate years of work in last two)

Q.8. Have you attended a training programme before starting your present job?

(A) Yes ....

(B) No ....

Q.9. If the answer in question no. 8 is yes, how long was the period of the training?.

(A) Less than a month ....

(B) Between 1 - 2 Months ....

(C) Between 2 - 4 months ....

(D) More than four months ....

Q.10. To what extant do you think the training program is related to your daily work activity?

(A) Very much related ....

(B) Related to some extant ....

(C) Not related ....

Q.11. Which of the following factors was the most appeal to you, when you joined this job?

(A) Salary ....

(B) Security ....

(C) Working conditions ....

(D) It was the only appropriate job at that time ....

(E) Uncertain ....

Q.12. Tick the appropriate answer to identify the degree of your overall satisfaction in your job?

(A) Very satisfied ....

(B) satisfied ....

(c) Uncertain ....

(D) Disatisfied ....

(E) Very much disatisfied ....

Q.13. Factors that you are very much satisfied with:
(Please put numbers according to the importance with 1 as the highest, 2 to the second and so on).

(A) salary ....

(B) Allowance ....

(C) Moral encouragement ....

(D) Working methods ....

(E) Others ....

Q.14. Fctors that you are disatisfied with:
(Please use numbers according to the importance, starting with 1 for the most important factor which you are not satisfied with,and so on.)

A.Working Methods ....

B.Salary ....

C.Moral encouragement ....

D.Additional allowances ....

E.Others ....

Q.15 Would you like to change your present job if the situation arose?

A.Yes ....

B.No ....

Q.16 If the answer in question no. 15 is yes, would you like to transfer to:

A.Another department ....

B. Another job outside this organization ....

Q.17 What is the number of your department members? ....

Q.18 Howmany of them would you consider them close friens? ....

Q.19 Regarding the answer in question no. 18 , how frequently do you see him (her)/ them outside the work place?

A.Regularily ....

B.Often ....

C.Uncertain ....

D.Rarly ....

E. Never ....

Q.20 What do you think of your relationship with your own direct supervisor?

A.Very good ....

B.Good ....

C.Satisfactory ....

D.Bad ....

E. Very bad ....

Q.21 Which of the following tasks do you think your direct supervisor is most concerned with:

(I) Getting Work Done

A.Strongly agree ....

B.Agree ....

C.Uncertain ....

D.Disagree ....

E.Strongly disagree ....

(II) Application of rules and regulations

A.Strongly agree ....

B.Agree ....

C.Uncertain ....

D.Disagree ....

E.Strongly disagree ....

(III) Personal Initiatives

A.Strongly agree ....

B.Agree ....

C.Uncertain ....

D.Disagree ....

E.Strongly disagree ....

(IV) Efficiency

A.Strongly agree ....

B.Agree ....

C.Uncertain ....

D.Disagree ....

E.Strongly disagree ....

(V).Other factors ....

Q.22 If you are to be absent for personal reasons, would your supervisorgives you;

A.A verbal permission ....

B.Written permission which to be kept in your file ....

C.No permission ....

D.Uncertain ....

Q.23 How many times do you think you have left the work place without a permission in the last six months?

Please state : ....

Q.24 In which of the following lateness cases would you think you might be asked to submit a written explanation to your supervisor:

A. Less than 15 minuts ....

B. Between 15 - 30 minuts ....

C. Between 30 - 45 minuts ....

D. Between 45 - 60 minuts ....

E. More than one hour ....