University of Glasgow Business School

Department of Management Studies

An Empirical Investigation of Information Technology Adoption Behaviour in Banks in Bahrain

Volume I

Mohamed Ali Abdulla Ghuloom

Submitted in fulfilment of the Degree of Doctor of Philosophy

September, 1997

ProQuest Number: 10391419

ProQuest 10391419

Acknowledgements

It is through words, symbols and anecdotes that cultures are built.

My wife and I were surprised when we received our first letter in Glasgow. As we had just moved to our house in Ibrox, there were very few who knew our new address then. The letter was without a stamp. Whoever brought it to my address must have taken the trouble of delivering it personally. The letter was an invitation for a dinner from my supervisor Professor Arthur Francis and his wife Mrs. Jan Francis. The care and support that the students of Professor Francis received started from their first day with him. I would like to follow this example in my future career. I would like to express my deep appreciation to him for his support and guidance during the course of this research.

Training is very costly. However, there isn't any cheaper alternative to it if nations want to progress. I would like to express my gratitude to my employer Bahrain University for sponsoring me. I would like also to express my gratitude to the Government of H. H. the Amir of Bahrain for the ambitious training strategy that they are following and the support that the expatriate Bahraini students are receiving.

This work could not have been done without the participation of informants from banks and other organisations. I would like to thank them all for their support.

I remain indebted to my mother, who, despite her battle with cancer, kept supporting me until her last days, and to my father, my wife, my children and the rest of my family for their encouragement, support, understanding and sacrifices.

I am grateful to the staff and fellow research students at the Glasgow University Business School and my friends for their support and good wishes.

Abstract

This thesis is an empirical investigation of information technology (IT) adoption behaviour within the banking industry in a developing country, which is Bahrain. It aims to provide an understanding of IT strategy formation processes, the drivers of the adoption behaviour, the influence of vendors and others on the adoption process, the characteristics of these banks' cultures and their effects on the banks' adoption approach, and the banks' approach to collective IT projects.

The nature of the research questions mentioned above suggests the necessity of qualitative research. There are eleven case studies presented in the thesis based on semi-structured and unstructured interviews with representatives of top management and IT units within the banks. Other informants from other non-banking organisations were interviewed as well, to further clarify some of the topics raised by these banks.

The IT strategy formation process within the banks went into different phases. During the early phases they were more ad hoc in nature. In later phases new patterns emerged amongst the banks. The incursion of the strategic discourse within these banks and subsequently their adoption behaviour were influenced by the changes that occurred within the banks' external and internal environments. Three forms of strategy formation patterns were identified. The first was amongst two of the small local banks. The strategies were informal, ad hoc in nature, and driven by a 'one man show'. The political influence of the sole product champions was essential for the adoption of the strategy and IT within these banks. The second form of strategy formation pattern was identified with three local banks: two big banks, followed thereafter by one small bank. The strategy formation was formal, influenced by the consultants who set the path to formalise the process, and the process took place within systems steering committees which included the top management and representatives from the support units. By virtue of their power and authority, the views of the top management dominated within the systems steering committees; however, input from the IT units was essential as the top management lacked the knowledge to take informed decisions without them. The board of directors was involved in the process of approving the IT strategies. We have termed this process "formal-rational", although in some cases it was not remote from the micro-political struggle. The third form of strategy formation process was identified with branches of foreign banks. These banks' strategies were 'imposed strategies' from their groups outside Bahrain, were global in nature, had a 'trickle-down' effect, and were less responsive to local changes and needs in Bahrain. The foreign bank branches in Bahrain were in a political struggle with their development centres to shape the 'imposed strategies' if possible to meet their local needs.

The banks' strategic vision was influenced by how these banks acquired expertise within this field. An important source of expertise came from the vendors. With the exception of one case study, all other case studies had had a strong and long relationship with either their hardware or software vendors. This form of expertise was the source of a tacit knowledge which influenced these banks' IT strategic vision. Those banks that were

influenced by this source of tacit knowledge depended heavily on acquiring 'off-the-shelf' application packages to cater for their systems' needs. There were other sources of the tacit knowledge which was acquired through the banks' networks and relations with other organisations. In addition to the vendors, the consultants and the role model banks were mentioned as sources of expertise. New recruits and training programmes formed the other sources of expertise within the local banks.

There was high isomorphism amongst the banks. Such isomorphism was described as 'lemming behaviour', as these banks tended to behave similarly in terms of their approach to business and the adopted IT. There was a tendency to match the institutionalised norms within the industry. As to the local 'formal-rational' banks, their approach was driven by legitimacy and psychological drivers to appear as rational and progressive, in addition to the economic and efficiency drivers opened by the changes in the environment. The foreign banks were isomorphic in their approach to the IT arena. They were more influenced and driven by the plans of their groups.

Metaphors were used to classify the banks' cultures. The 'daring banks' and the 'catholic marriage banks' experienced 're-thinking' and 're-doing' and were more able to absorb new knowledge. Though the 'play-it-safe' culture experienced changes in its approach to its IT, its past legacy influenced the bank's approach to adopting its current system. The 'demanding mistress' culture experienced higher rate of inertia than the 'daring banks' and 'catholic marriage' cultures. The 'others do the thinking and the doing' culture was more influenced by changes within the head quarters and regional offices outside Bahrain than inside Bahrain.

Cultural factors interacted with economic-efficiency factors in shaping the strategic behaviour of the banks.

Inertia characterised the banking industry at certain stages, and affected these banks' adoption behaviour. The sources of the inertia may be attributed to internal factors pertaining to the banks and external factors pertaining to the cultural gap between some of these banks and the regulatory body visions.

Tight regulation was an institutionalised feature of the banking industry and therefore collective IT projects such as the ATM shared network could not be initiated without the participation of the regulatory body. Nonetheless, the process of shaping the features of the collective project was influenced by the negotiation power of the key participants in such projects.

The thesis argues that there is a need for a comprehensive view for understanding the take up of information systems and technology (IS/IT) as they expand beyond the mere technical and functional domains to span other socio-political, cultural and institutional domains. Based on this argument, I argue that there is a need for more sophisticated and comprehensive frameworks that capture both the social and technical dimensions of IS/IT.

Table of Contents

Chapter One

Introduction

This thesis is an empirical investigation of information technology (IT) adoption behaviour within the banking industry in a developing country, which is Bahrain. It aims to provide an understanding of IT strategy formation processes, the drivers of the adoption behaviour, the influence of vendors and others on the adoption process, the characteristics of these banks' cultures and their effects on the banks' adoption approach, and the banks' approach to collective IT projects.

The IT adoption practices are covered in the literature within two main schools of thought. The first advocates that IT adoption is done rationally and through rational means. Based on this conception, scholars in this school like Earl (1988, 1989) and Scott Morton (1991) provided frameworks prescribing the means through which IT strategies could be deployed to gain competitive advantage.

The other body of literature goes beyond the narrow focus of the rational explanation of the adoption process. This school of thought considers the adoption process as an outcome of social, political, and institutional processes.

My stance is aligned to the second school of thought. I argue in this thesis that the rational perspective analysing adoption behaviour provides only a partial explanation of the phenomenon under investigation and needs to be complemented with understanding the social, institutional, and political contexts that affect and shape this adoption behaviour.

Significance of the study:

The empirical work focuses on the financial sector in Bahrain. It presents eleven case studies which were developed based on a qualitative methodology. Generalisations from information systems case studies, according to Walsham (1995), could take the following forms:

- "development of concepts;

- generation of theory;

- drawing of specific implications; and

- contribution of rich insight".

My thesis contributes to providing a rich insight into the adoption process of IT within the financial services sector in a developing country, which is Bahrain. The majority of the literature in this field has been made with reference to the industrial world. My thesis fills a gap in the literature as it provides an understanding of this phenomenon in a part of the developing world which was not studied in this respect before. Moreover, it adds to the behavioural literature which explores how institutional, cultural and political accounts compete with rational accounts in explaining adoption behaviour.

Organisation of the thesis:

The thesis is organised into eleven chapters as follows:

Chapter one starts with an introduction to the thesis.

Chapter two discusses the research methodology of the thesis. It lays out the main research questions and the methodological approach I followed. Moreover, it discusses how Nud.Ist, a qualitative data analysis computer package, was used in the analysis process. The chapter concludes by discussing the main limitations of the thesis.

Chapter three reviews the literature related to the above topic.

Chapter four introduces the financial services sector in Bahrain. This chapter gives the reader a background about the field in which the case studies were operating. It discusses the main economic changes that took place within the last twenty years which have influenced the players within that field. It also discusses the main features characterising the commercial banking industry.

Chapters five, six and seven present a 'thick' description of the case studies of the eleven banks. Chapter five includes six case studies of six foreign banks' branches in Bahrain. These banks were isomorphic in their approach to IT adoption. Chapter six includes a description of two small local banks that were similar in their approach to adopting IT. These banks' strategies were ad hoc, informal, and influenced by the vision of a main leader. Chapter seven presents three case studies of three local banks which followed a formal-rational approach to strategy formulation. These three banks behaved similarly in their adoption behaviour.

Chapter eight provides a case study of the shared ATM network project. This chapter discusses institutional factors within the banking environment and their influence on the collective IT projects.

Chapter nine explores the nature of the IT strategies within all these banks and the drivers behind these initiatives.

Chapter ten discusses the nature of the banks' relationship with the key stakeholders in the industry and the effect of these relationships on shaping the banks' strategic vision. This chapter elaborates on how the banks' strategic vision was influenced by the tacit knowledge passed from the vendors to the banks.

Chapter eleven focuses on exploring the effects of culture, history, and organisational change, among others, on the banks' adoption behaviour.

Chapter twelve concludes the thesis by summarising the main findings within the above chapters.

Chapter two

Literature Review

Introduction:

Strategic issues in IT are approached from within different paradigms. The first of these paradigms is the rational-economic paradigm, which ascribes a strategic role to IT, and assumes that organisations seek to maximise their efficiency through exploiting this strategic role. Another paradigm goes beyond the narrow views of the rational paradigm to consider the social and political perspectives of IT strategic issues. More about these two paradigms will be discussed within this literature review.

This chapter starts with reviewing some of the literature written from within a rational paradigm. It covers the implications of IT for organisations in the 1990s as reported by an MIT research project, then it covers some of the main frameworks introduced in the eighties which prescribed how to derive a strategic advantage for an organisation from IT. A criticism of these frameworks is provided.

The literature review also covers IT strategy formation from a rational perspective, complemented thereafter by a socio-political and behavioural perspective.

In addition to the above, a theoretical background about the role of networks, institutions, organisational change and inertia is provided, as these topics were used in my analysis chapters to provide a base for better understanding of the adoption behaviour phenomenon amongst the banks.

The literature review concludes by reviewing some quantitative Ph.D. theses which adopted a positivist approach and a quantitative methodology. This type of research is criticised for being narrow in scope and focus.

Impact of IT on organisations in the 1990s:

In this part of my literature review, I provide a summary of the impact of IT on organisations as reported by a research project carried out by MIT (Scott Morton, 1991).

The research project argued that IT has a profound effect on organisations. These effects are enabled by the continuously decreasing cost of IT on one hand, and on the other, by the continuous increase in the efficiency of these technologies. The main impact of IT on organisations in the 1990s are as follows:

- **"IT is enabling fundamental changes in the way work is done"** (Scott Morton. 1991)

IT has a profound effect on the way work is done in terms of production , co-ordination. and the management of work processes.

The production work consists of physical production, information production and knowledge production. Organisations seemed to be more able to exploit IT to enhance the physical production and information production than knowledge production.

The second effect of IT is on co-ordination. Exploiting electronic networks within and amongst organisations enables them to eliminate the effects of geographical distance and time difference as far as the information flow is concerned. Moreover, sharing the organisation's memory. in the form of electronic databases, enables more effective co-ordination.

6

The third effect of IT is on the work done by the managers. This is achieved through enabling the managers to efficiently set the direction and control the performance of their organisations.

- **"IT is enabling the integration of business functions at all levels within and between organisations"** (ibid., 1991)

Investment in electronic networks enhances the integration between organisations and may take the following forms:

- linking previously unconnected business functions;

- linking the value chain of different organisations;

- enabling subcontracting of the value chain; and

- establishing electronic markets in which shopping around is done via this network.

- **"IT is causing shifts in the competitive climate in many industries"** (ibid., 1991)

IT has a profound impact on the competitiveness of the industry. The competitive climate may be reconfigured based on using IT collectively - old rivals may become new allies based on sharing the benefits of IT rather than retaining it.

- **"IT presents new strategic opportunities for organisations that reassess their missions and operations"** (ibid., 1991)

The profound effect of IT on work conditions, the opportunities opened to the organisations from the IT networks, and the change in competitive climate as a result of exploiting these networks may dictate that organisations need to rethink their missions, the way they conduct their business, and their design structure. There are three stages

that organisations may go through as a result of their response to their environment, which are *automate, informate, and transformation.*

During the automate phase, cost reduction of the production process represents the main achievement.

In the informate stage, new analytical skills need to be developed to exploit the opportunities associated with the by-product information produced by the IT.
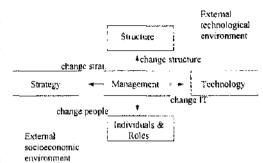
The transformation stage requires leadership, vision, and sustained organisational empowerment to exploit the opportunities open in the environment and enabled by IT.

- **"Successful application of IT will require changes in management and organisational structure"** (ibid., 1991)

IT is a critical enabler of the redefinition of the organisation. This is because IT enables the redistribution of power, function, and control. With continuous improvement in IT, the cost of co-ordination is declining. This means that more efficient co-ordination is allowed at a lower cost. Moreover, IT is causing change in the economies of scale: for example, flexible manufacturing is enabling smaller organisations to be low-cost producers. Management has the challenging task of changing its structure and method of operation to keep it responsive to the dynamic and competitive world.

- **".. lead (the) organisations through the transformation necessary to prosper in the globally competitive environment"** (ibid., 1991)

One of the major challenges facing organisations is to transform successfully to cope with their turbulent socio-economic and technological environments. These organisations need to make the necessary changes in five sets of internal forces (see Figure 1)

Figure 1: role of management in the change process.

which need to be in equilibrium to cope with changes in the organisations' external environments. There are several aspects that organisations need to consider for successful transformation; these are concerned with the:

- clarity of business mission and objectives;

- alignment between IT strategy and other organisational aspects; and

- implementation of a robust information technology infrastructure.

Five levels of IT-induced reconfiguration:

Venkatraman's (1991, 1994) 'five levels of IT-enabled business transformation' (see Figure 2) contends that the potential benefits of IT increase as an organisation transforms successfully through the different levels which exploit IT within the organisation itself and between the organisations. The underlying thesis of the framework is that
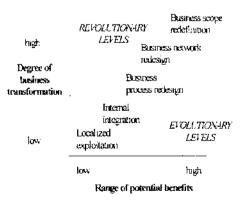
Figure 2: Five levels of IT-induced reconfiguration

the potential benefits of IT are marginal if IT is only superimposed on the organisation. The framework argues that the benefits of IT increase considerably as the organisation's IT investments are accompanied by the necessary organisational changes in strategies, structure, processes and culture.

The first two levels of the framework, localised exploitation and internal integration, are of an evolutionary nature due to their limited influence on the business processes, and hence the potential benefits derived from IT are limited as compared to the next three levels. The business process redesign, business network redesign, and business scope redefinition are revolutionary levels. Organisations that transform through these levels experience revolutionary changes in the business processes that maximise their benefits from utilising IT. The revolutionary changes take place within the boundaries of the organisations as well as across these boundaries through restructuring the networks and creating interdependencies amongst organisations to enhance their competitiveness.

Influence of collective IT projects on the competitive structure- a case study of EFTPoS network in the UK.

Howells and Hine (1993) reported a case study about the establishment of Electronic Fund Transfer at Point of Sale (EFTPoS) networks in the UK. The case study demonstrates, among other things, the changes in competitive structure that may result from collective exploitation of IT.

Before 1985, banks acted individually to introduce commercially and technically distinct networks. However, the banking community perceived the need to collaborate to introduce a common infrastructure for a sophisticated EFTPoS network and share its cost. The network aimed to benefit the banking community members in reducing the cost of cheques and other forms of paper money transmission. The collaboration between the banks turned to competition within the EFTPoS UK Ltd, the organisation

established by the banks to introduce the national network. As the biggest merchant acquirer, Barclays bank feared that its dominance on the clearing business would be eroded by the proposed EFTPoS network. Barclays accordingly introduced its Visa Connect scheme. Lloyds soon followed and introduced its Visa debit card. To counter attack the two initiatives, an alliance between Midland, Natwest and The Royal Bank of Scotland formed the Switch card scheme. These initiatives resulted in the demise of the EFTPoS UK Ltd. The above case study highlights changes in the competitive climate that may accompany collective IT projects.

IT and Strategic Advantage:

Earl (1988) amongst others, e.g. McFarlan, 1984, Porter and Millar 1985, Wiseman (1985), to mention three of the influential scholars in the eighties, ascribed a strategic role to IT. Earl contended that IT could be employed strategically in at least four ways:

"1. to gain competitive advantage;

2. to improve productivity and performance;

3. to facilitate new ways of managing and organising; and

4. to develop new businesses." (p. 33)

The framework for the frameworks:

Earl (1988, 1989) argued that the available frameworks are valuable in guiding the organisations in their attempt to exploit IT strategically. However, these frameworks fall short of providing a complete answer. He proposed the 'framework of the frameworks' as a tool for guiding the organisations in their strategic exploitation of IT. This framework sees the other frameworks as complementary rather than substitutes.

and therefore presents them as three types of framework categories which are awareness, opportunities, and positioning (see Table 1). Each of these frameworks has its own purpose, scope and use as will be discussed later. Earl argued that these frameworks are essential for understanding the strategic era of IT and to contributing to its evolution.

Table 1: A framework of frameworks. Earl (1989, p. 40)			
Framework/ attribute	Awareness	Opportunity	Positioning
Purpose	Vision	Ends	Means
Scope	Possibility	Probability	Capability
Use	Education	Analysis	Implementation

Awareness frameworks:

Awareness frameworks, or 'alert' models as Andreu et al. (1992) called them, aim to create understanding and appreciation of the strategic potential and impact of IT.

An early example of an awareness framework is Benjamin et al.'s (1984)[1] strategic opportunities matrix. The matrix is a pedagogic tool and aims to raise awareness. It is based on answering two questions:

- "Can I use IT to make a significant change in the way we are now doing business so my company can gain a competitive advantage?

---

[1] Cited in Earl (1989) p. 41

- Should we, as a company, concentrate on using IT to improve our approach to the market place? Or should we centre our efforts on internal improvements in the way we currently carry out the activities of the firm?" (p. 41).

The answers to these questions place the organisations into a grid. One of its dimensions describes whether, based on IT, significant structural changes can be brought about, or traditional products and processes can be improved instead. The other dimension determines whether IT has a profound effect on improving

	Competitive market position	Internal Operations
Significant structural change	Merrill Lynch	DEC
Traditional products and processes	American Hospital Supply	United Airlines

Figure 3: Strategic opportunity grid, Benjamin et al (1984), cited in Earl. (1988, 1989) and Andreu et al. (1992)

the organisation's competitive market position or is just limited to improving internal operations. The matrix used several examples which are located in its four quadrants to demonstrate the effect of IT. For example, Merrill Lynch in strategic alliance with Banc One of Ohio exploited computing and telecommunications in an innovative manner to establish a new product market and erect barriers to entry. Through its Cash Management Account (CMA), Merrill Lynch bundled a number of financial services all in one. These services were previously available separately. No other competitor was able to provide a similar account for some time, making substitutes difficult to find and creating a switching cost for its customers. American Hospital Supply exploited terminal-based order entry facilities to enhance the market position of the products that it traditionally manufactured. DEC developed an expert systems (XCON) which enabled it to restructure its internal operations to create computer configurations for customers. The dramatic change in its internal operations enhanced DEC efficiency, and improved its cash flow and level of customer satisfaction. United Airlines exploited teleconferencing to improve its internal operations and increase the efficiency of the traditional processes it performed, such as co-ordination across airports in emergency situations and daily briefings.

Parsons' (1983)[2] framework is one of the early awareness models. It is based on an analysis of the competitive environment and strategies of business, and focuses on the possible opportunities to exploit IT strategically. Parsons' framework draws on Porter's five force model (powers of suppliers, customers, new entrants, substitutes, and rivals) and the three generic competitive strategies which are differentiation, cost leadership or focus. Table 2 indicates that the impact of IT can be at different levels. At the industry level, IT may affect the industry products and services, markets, and/or economies of production. At the firm level, IT may impact the firm's ability to manipulate or influence Porter's five competitive forces. At the strategic level, IT may impact Porter's generic competitive strategies of cost, leadership, differentiation, and focus.

Table 2: Strategic impact of IT (after Parsons) cited in Earl (1989) p. 43

Level of impact	Effect of IT
Industry level	Changes fundamental nature of the industry
Firm level	Influences competitive forces facing the firm
Strategy level	Supports the generic strategy of the firm

[2] cited in Earl (1989, p. 43)

A third example of the 'alert' or awareness frameworks is Porter and Miller's (1985) information intensity grid (see Figure 4). The grid exploits the possibility of exploiting IT for competitive advantage based on evaluating the intensity of information within the firm's value chain (represented by the vertical dimension

Information content of a product

	Low	High
High	Oil refining	Newspapers Banking Airlines
Information intensity of the value chain		
Low	Cement	
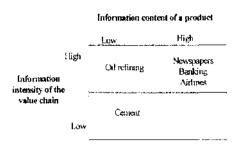
Figure 4: Porter and Millar's information intensity matrix. Cited in Earl (1989, pp. 44-45)

of the matrix), and the information content of the firm's products (represented by the horizontal dimension of the matrix). Industries such as the financial services and the airline industry have a high intensity of information in their value chains and products. as indicated in the above figure. The oil refining industry has a high intensity of information in the value chain but little information content in the product. The cement industry has the least intensity of information amongst the mentioned industries in its value chain and product. The framework suggests that where the intensity of information is low in both the products and the processes, IT would not have a dramatic impact on that industry. However. as the information intensity increases in the processes and the products, IT would play a more strategic role in that industry.

Earl (1988. 1989) argued that although these models may be used as teaching instruments. they are too descriptive and too general to guide the practitioners to exploit IT-based strategic opportunities. For this reason, Earl proposed what he called "the opportunity frameworks".

Opportunity frameworks:

The opportunity frameworks are more analytical than the former type of frameworks. but also have an educational role. This type of framework aims to help organisations to define the areas where IT can be deployed strategically and suggests application ideas. The following are examples of these frameworks.

Porter and Millar's (1985)[3] value chain model enables the search for potential IT opportunities through a systematic analysis of the series of interdependent activities that deliver a product or a service to the customer. This process may define where IT can profoundly affect one or more of these activities, improve their effectiveness, and/or fundamentally change the nature of these activities (Applegate et al, 1996, p. 93).

Ives and Learmonth's (1984)[4] customer resource life-cycle model focuses on the linkages between the customers and the suppliers, and analyses how and where IT could be harnessed to improve the customer-supplier linkages and possibly introduce competitive advantage. The customer resource life-cycle has four major phases:

- "Requirements: determining the requirements of the resource

- Acquisition: obtaining or developing the resource

- Stewardship: managing the resource while in inventory

- Retirement: disposing of the resource" (Earl, 1988, p. 42)

The Runge and Earl's (1988) framework (see Table 3) is based on the Ives and Learmonth's (1984) customer resource life cycle model which is presented above. The Runge and Earl framework identifies twelve processes associated with the customer resource life cycle phases mentioned above. These processes are referred to as linkages (as shown in Table 3) because they identify opportunities for the suppliers. These linkages provide the suppliers the opportunities to link their processes to Telecommunication-Based Information Systems (TBIS), and to do so in ways that differentiate the firm's product and create switching costs for customers. Runge et al. (1988) add another dimension to the framework, which represents the strength of the TBIS as a competitive weapon. The strength of TBIS is defined as the degree to which the supplier can control his customers through TBIS. These levels of strength are defined below:

---

[3] cited in Earl (1989, p. 47).

[4] cited in Earl (1989, p. 48).

- Internal support: The TBIS replace the internal mechanisms supporting the customer interaction life cycle. At this level of strength the effect of TBIS has indirect consequences on the customers.

- Link up: The supplier value chain is linked up to customers but the switching costs for the customers are low.

- Lock in: TBIS establish an operational dependence where the customer depends on the supplier. There is a high switching cost in this case.

Table 3: Runge et al. framework.

Stage	Linkage	Internal	Link-up	Lock-in
Requirements	Establish requirements			
	Acquired information			
Acquisition	Specify			
	Select a source			
	Order			
	Authorise and pay for			
	Acquire			
Stewardship	Monitor			
	Manage			
	Support			
Retirement	Terminate use			
	Account for			

Each of Porter's five forces - threats of new entrants, buyers' bargaining power, suppliers' bargaining power, threat of substitute products or services, and industry rivals- forms a base for identifying opportunities for gaining competitive advantage through exploiting IT (see Table 4).

Table 4: Impact of competitive forces

Force	Implication	Potential uses of IT to combat force
Threat of new entrants	New capacity	Provide entry barriers:
	Substantial resources	Economies of scale
	Reduced prices or inflation of incumbents' costs	Switching costs
		Product differentiation, Access to distribution channels
Buyers' bargaining power	Prices forced down	Buyer selection
	High quality	Switching costs
	More services	Differentiation
	Competition encouraged	Entry barriers
Suppliers' bargaining power	Prices raised	Selection
	Reduced quality and services (labour)	Threat of backward integration
Threat of substitute products or services	Potential returns limited	Improve price/performance
	Ceiling on prices	Redefine products and services
Traditional intraindustry rivals	Competition:	Cost-effectiveness
	Price	Market access
	Product	Differentiation:
	Distribution and service	Product, Services, Firm

Source: Applegate et al (1996) p. 87

In line with the above, Porter prescribed three main generic strategies which may capitalise on IT to gain competitive advantage. These strategies are cost leadership, cost focus, and differentiation.

Wiseman's (1985)[5] 'strategic option generator' (see Figure 5) defines five strategic thrusts, which are differentiation, cost, innovation, growth and alliances. Each of the strategic thrusts could be used to target strategic goals- customers, suppliers, and / or competitors. IT can be capitalised upon to pursue these strategic thrusts either offensively or defensively, through using or providing information.

What is the strategic target?		
Supplier	Customer	Competitor

↓

What is the strategic thrust?
Differentiation	Cost	Innovation	Growth	Alliance

↓

What is the mode?	
Offensive	Defensive

↓

What is the direction?	
Use	Provide
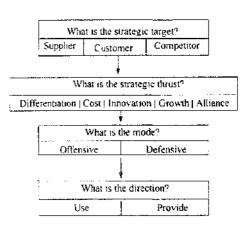
Figure 5: Wiseman's strategic option generator.
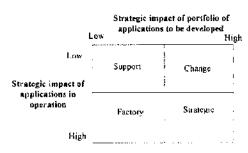
Earl (1989) argued that the opportunity frameworks needed additional techniques besides the cost-value ones, and also needed more search tools to use in application areas and to assess specific technologies. To supplement the 'awareness frameworks' and the 'opportunity frameworks', Earl proposed another set of frameworks, which are the 'positioning frameworks'.

Positioning frameworks:

The positioning frameworks are tools that are used to help assess the strategic importance, the character, and IT position within a given enterprise. These frameworks help to understand how IT functions and how IT can be assessed, developed and improved in a particular organisation. Positioning frameworks focus on implementation and they are poor in defining opportunities (ibid. p. 59). Examples of these frameworks are as follows:

---

[5] Cited in Andreu (1992, p. 279)

20

McFarlan and McKenney's (1983)[6] strategic grid (see Figure 6) helps in evaluating the strategic impact of the portfolio of applications to be developed in the future (high and low), and the strategic impact of the applications in operations (high and low). If both impacts are low, information

Figure 6. *McFarlan et al. strategic grid*

systems/technology (IS/T) serve only as a support but they are not essential for the organisation's operations nor its competitive success; if the present impact is high and the future impact is low, IS/T serves as a factory where the information systems are essential for managing the day-to-day operations. However, the development of applications portfolios does not provide a competitive advantage. If the present impact of the IS/T portfolio is low, whereas, the future impact of IS/T is high, then the organisation needs to consider a change or turnaround strategy as the developed applications are essential for their future strategic goals. Finally, if the present and future impacts of IS/T are high, then the organisation or the business is in a strategic position where the portfolio of applications is essential for the organisation's operations and the developed applications are essential for their competitive success.

Andreu et al's (1992, p. 283) positioning grid is based on two dimensions (see Figure 7). One dimension represents the impact of the value chain link in business (high or low), and the other represents the potential of IS/T support for this link (high or low). When the impact of the value chain link in business is high and the potential support of IS/T to this
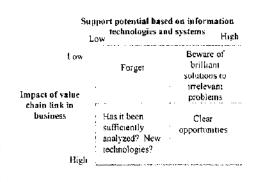
Figure 7: *Impact grid in business-support potential with IT/IS.*

---

[6] Cited in Earl (1988, 1989) and Andreu (1992)

link is high there are 'clear opportunities' for IS/T use. However, where both dimensions are low then 'forget' using IS/T. When the impact of the value chain in business function is high while the IS/T support potential is low, then the situation requires further analysis to determine whether IS/T could contribute something more. Finally, when the impact of value chain in the business function is low while the potential support of IS/T is high, then 'beware of providing expensive solutions to irrelevant problems'.

Earl's (1989) industry model determines the impact of IT based on the industry's attributes. Each of the industries has different attributes and thus the importance of IT may vary from sector to sector. Sectors such as airlines, financial services, and retailing depend heavily on IT for delivering their goods and services, and thus this sector is called a 'delivery' sector. The infrastructure of the sector is highly dependent on IT, and each firm's IT infrastructure represents a big proportion of its asset base. A poor infrastructure is a source of threat to the firm's daily operations and future strategies. A second classification of the sectors is the dependent sector. Industries such as automobiles and textiles depend more and more on IT to implement their business and functional strategies. These strategies require major automation, information, or communication which are made possible by these technologies. A third classification of sectors, the drive sectors, are those in which IT has a potential for a competitive advantage (or the lack of IT could be a source of a competitive disadvantage). The requirements and imperatives, however, are not clear. The management needs to have faith in IT, and needs to drive for continuous benefits from IT. The food industry is an example of the drive sector. A fourth classification of sectors is one in which the effects of IT- opportunities or threats - are either not yet apparent or perceived. Based on the above analysis of sectors, IS/T practices vary depending on the nature of sector. For example for the delayed sectors, IS/T has no strategic impact and thus IS/T strategy may be disregarded. For the delivery sectors, IT strategy is more infrastructure-led. It is concerned with "laying down telecommunications networks, rationalising data standards, creating appropriate hardware environments and developing a sound basic business systems foundation..." (pp. 80-81). For the dependent sectors, the IS strategy is more business led. Once the business

imperatives are worked out, IS is seen as an enabler of these business imperatives. For the drive sectors, the firms search for less obvious strategic gains, and thus the IS strategy is opportunity led - a mixture of infrastructure investment and business direction (ibid., p.82).

The above frameworks are examples of the frameworks that are classified under the three broad classifications: awareness, opportunity and positioning. However, these are not exhaustive. As mentioned earlier, Earl argued that these frameworks are complements rather than substitutes to each other.

Information vs. IT for competitive advantage:

King et al. (1989) present another classical and rational perspective which argues that both information and information technologies have different strategic implications and thus the distinction between the two is important. Information technology "includes both the hardware components that make up the information system architecture and the system software that enables it to function as an integrated whole". Information. on the other hand, refers to the "data that has been evaluated in such a way that it alters our expectations or our view of the alternatives that are available. Here, it also refers to the analytic software that facilitates this use of data".

IT depreciates over time since its potential for adding value decreases as time goes by. In contrast, information appreciates as time passes. The new uses of information and better understanding of it cause this appreciation in worth.

In line with the other classical articles of the 1980s. King et al. provided examples to demonstrate the strategic implications of differentiating between IT and information. and using IT and information collectively. Moreover, their empirical work demonstrated that IT managers were aware of the distinction between the strategic use of IT and information within the following areas: "suppliers relations, customer service, product service. new product planning, cost competitiveness, and market segmentation".

In addition to the above, King et al. identified a number of enablers and inhibitors that affect the successful exploitation of information resources. The facilitator factors are:

"- Existence of extensive computing facilities;

- Strong technical support staff;

- Technology leadership position relative to the industry as a whole; and

- Strong market or financial position"

The inhibitors are:

"- Deficiencies in the planning process;

- Lack of clearly defined development priorities;

- Insufficient management support for strategic application development efforts"

There are similarities between King et al. and Earl's (1988) findings regarding the facilitators of successful implementation of information resources. For example, Earl discussed some of the IT implementation enablers such as the extension of the internal systems where he reported that the majority of the systems he studied were interorganizational extensions of information systems that already existed internally (p. 140). In addition to the above, organisational support was another enabler that Earl and King reported. Weill (1990) supported King et al. in reporting the importance of a strong market position in providing the firm with more power to exploit the strategic advantages of information resources.

Human resource IT and competitive edge:

Broderick et al. (1992) wrote that information technology used in human resources could be exploited to develop competitive products or services. Their framework may aid managers in having a better understanding of how human resource IT (HRIT) can support or help to achieve competitive objectives. The framework is based on a) defining the human resource objectives and the type of decisions related to these objectives, b) describing computer applications and the related decisions these applications are designed to improve, and c) matching the objectives with the applications that provide the best support.

Broderick et al. defined three competitive strategies as being the main drivers for HR competitive objectives. These are:

- Cost leadership strategy: This strategy aims to enable the firm to become a low cost producer.

- Quality/customer satisfaction strategy: The emphasis of this strategy is on improving the work methods, customer relations, and/or product/service as a means to controlling prices.

- Innovation strategy. The emphasis of this strategy is on differentiation and this may be done through creating new products/services, and new working methods.

The following table specifies the HR objectives that are associated with the three competitive strategies.

HR Competitive Objective	Firm Competitive Strategy
• People working harder: High output for a given labour cost	• Cost leadership
• People working smarter: continuous improvements.	• Quality / customer satisfaction
• People working with vision: workable discoveries	• Innovation

Broderick et al. discussed three types of applications which are transaction processing, reporting, and tracking systems; expert systems; and decision support systems. The authors' framework then matched these applications with the HR objectives and competitive strategies. Their conclusion was that the three types of computer applications could be used differently to achieve each of the HR competitive objectives.

Problems with SIS frameworks:

The prescribed strategic information systems (SIS) frameworks, Doyle (1991) argued, are not problem free. He identified the following problems associated with them.

- The fact that there are many frameworks may indicate that none is adequate. These frameworks represent only part of the reality, illuminating a particular aspect of the environment while leaving the rest in the darkness. "... like marriage, one may not be able to tell until after the event whether the framework was a success or not. Like marriage too, there are the problems of fatal attractions, evasions of the real problems, and so on. For the worst of reasons one may be seduced by a framework." (Ibid., p. 274).

- The relativity of the framework to the place and industry is another problem with these frameworks. Most of the frameworks that were discussed earlier were a

product of the dominant American business culture, and they emerged, and may thrive and survive mainly because they reflect that culture. One may question their suitability for other cultures. The other issue is that these frameworks are unable to address the requirements of the different industries. For example, Porter's value chain model does not work if the firm is not a marketing or a distribution company- "Where, it has been asked, is the supplier in a solicitor's business, or in a financial services company..?". The frameworks also have limited implications for public sector organisations since they consider mainly the profit making organisations.

- The frameworks as described by the literature assume implicitly that they 'exist outside time'. That is to assume that they are as valid tomorrow as they are today. The problem with these frameworks is that they may prove to be irrelevant as new factors, which these frameworks have not considered, may emerge within the changing environments. That is, the effectiveness of these frameworks may diminish over time as they are anchored in the environments they were born in, and these environments are ever changing.

- Frameworks may act like cages. They may inhibit the vision as much as they free it. By following frameworks, an organisation may believe that real insights only exist externally to the organisation itself. This would result in filtering out ideas generated internally. The ideal situation is that in which the organisation develops a sense of owning the problem as well as the processes to solve it. This is more likely to happen if the insight is developed within the organisation, an issue that the imported frameworks may do little, if anything, to encourage.

Interaction between strategy and IT:

The argument presented in this section aims to explore the nature of the interaction between technology and strategy as presented by Itami et al. (1992). Itami et al. argued that there are three forms of relationship between strategy and technology. In the first form of relationship, which, they state, is popular in the literature, the technology in this case determines the limit of
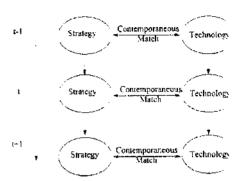
Figure 8: Contemporaneous match between IT and strategy

opportunities open to the firm. Or stated differently, the strategy is constrained by the capability of the technology. If the firm wants to adopt a more aggressive strategy that goes beyond the capability of technology, then it has to broaden its technological base. They argued that this form of relationship is static and directional from technology to strategy (see Figure 8). Itami et al. claim that the relationship between the technology and strategy is dynamic and may take another two forms as well.

The first of these two forms is when the contemporaneous relationship between strategy and technology results in creating technological capabilities that are in excess of the current needs. Itami et al. consider technology as one of the invisible assets that have a dual role of being an input to the strategy and at the same time being an output of the implementation of strategy. The
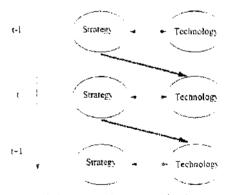
Figure 9: Strategy cultivating technology

accumulation of technology in this case is a by-product of learning by doing from the implementation of the strategy. The current strategy cultivates the future technology (see Figure 9).

28

The other form of the relationship is that in which the current technology that the firm possesses or its commitment to technological development affects the cognitive process of strategy development. The deep knowledge that people in the organisation may possess stimulates the generation of new ideas about products or ways of approaching the markets. These ideas may be implemented first in a
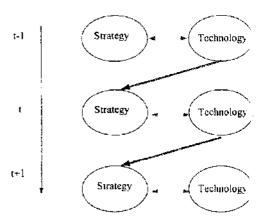
Figure 10: Technology driving cognition of strategy

fragmented manner. However, later on, efforts may emerge to integrate these scattered initiatives, usually by top management (see Figure 10).

IT strategy formation:

This section reviews the literature related to IT strategy formation by shedding light on the formal rational perspective which is then contrasted with a socio-political perspective.

Formal-rational approaches:

The formal rational school views organisations as ".. systems with coherent purposes and shared goals, and seeing the strategy formulation process as a series of logical steps.." (Walsham. 1993, p. 144). There are six premises underpinning the formal rational approach which assumes that the decision makers:

- "can evaluate all the relevant information

- can select the most appropriate course of action

- can formulate a strategy

- are able to implement the strategy

- can improve performance

- can enhance competitive position" (Currie, 1995, p. 53)

The strategic planning in this approach is characterised as being an outcome of a deliberate formal process and directed by rational and analytical thought which results in a framework or model outlining a series of sequential steps. The responsibility of the strategy formulation lies with the senior executives who imbue the organisations with direction. (Ibid., pp. 54, 55).

Mintzberg (1994) argued that strategic planning refers more to strategic formalising, which is rationalised, decomposed, and articulated, than strategic thinking and thus it needs to be called instead strategic programming.

The rational-prescriptive strategies, e.g. those informed by Porter's competitive forces, are market-led, and the internal issues of the organisation design are assumed to be adaptive (Fincham, 1995, p. 9).

There are criticisms of the formal rational approach however. Formal rational frameworks, for example, are criticised for being divorced from reality and failing to explain or influence success or failure; they require massive amounts of information that confuse rather than assist decision makers: they fail to address the problem of implementation; in reality it may not be feasible to meet the assumptions underpinning the rational behaviour which is related to gathering all of the relevant information and then prioritising and evaluating it by the decision makers; and it may lead to technical failure, since the rational approaches may depend on traditional performance measurement criteria such as ROI, short-term returns and top-down management investment which are not appropriate for the new technical climate (Currie, 1995). In addition to the above, the rational approach tends to ignore the social and political

processes that influence the strategy development and implementation (Fincham et al. 1994).

IT strategies may be addressed as substrategies within the business or corporate strategies, or they may be formulated in ways illustrated in the following examples from Earl.

The information strategy triangle:

As a means of avoiding the confusion associated with IT strategies, Earl (1989, 1996) identified three levels or domains of IT strategies, which he addressed as the information strategy triangle (see Figure 11).

Figure 11: The information strategy triangle (Earl. 1996. p. 487)

These three domains are IS strategy, IT strategy, and information management (IM) strategy.

The IS strategies are concerned with defining the IT needs of the business strategies. These strategies are supposed to be business-driven and therefore owned and influenced by general managers. The strategies are formulated to exploit competitive advantages or achieve business goals. The IS strategies produce a charter for the IT strategies, identifying what a firm should do with its technology.

The IT strategies, on the other hand, are concerned with technology policies. These strategies tackle questions related to the architecture, technical standards, and vendor policies. They are concerned with how to provide the IT solutions raised by the IS strategies. The IT strategies are handled by technologists because their technical nature

31

is not easily understood by non-technical senior managers. Moreover, the IT strategies are of a long term nature.

The third domain of the information strategy triangle is the information management (IM) strategies which are concerned "with putting the management into IT or with which way was IT to be managed"(p. 486). The IM strategies deal with 'who' questions. They spell out who has what responsibility and authority for managing the information technology and systems' (IT/IS) activities and policies (Earl, 1996, p. 497).

They define who has what responsibilities, the nature of relationships, and roles. Moreover, they are concerned with the management processes and control associated with the IS and IT strategies.

The organisation fit framework (OFF):

In addition to the three domains of the information technology triangle- IS, IT and IM strategies- that originated in the 1980s, Earl added the organisational
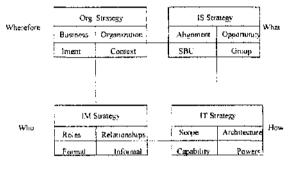
Figure 12: The organisational fit framework (Earl, 1996. p. 489)

dimension to the above model and stressed the need to maintain a fit among the four domains (Earl, 1996). Within each of the four domains of the organisation fit framework ('OFF', see Figure 12), Earl defined two components and two imperatives. The organisation strategy components consists of business strategy and organisational choices - structure, management control systems, and policies and procedures. The organisational strategy imperatives consist of strategic intent, which captures what the strategic advantage is and how it is sought. and the context, which represents the organisational culture, ethos, and management style. Each of the organisation strategy components and imperatives needs to be clarified in relation to the other information

strategy domains. Therefore, the charter of processes by which organisation strategy influences the other domains is through clarification.

The IS strategy domain consists of two components, which are alignment and opportunity. The alignment component is concerned with identifying the required IT support to business strategy, while the opportunity component is concerned with exploiting new businesses or new ways of doing businesses through innovative uses of IT. The IS strategies are addressed at the strategic business unit level and at the corporate or group level. These two levels of analysis represent the imperatives of this domain. Innovation is the process through which the IS strategy influences the other information strategy domains.

The IT strategy components consist of scope and architecture. Scope is concerned with defining the technologies that will be included in the IT strategy. Architecture is concerned with the framework that derives, shapes, and controls the IT infrastructure. The imperatives of IT strategy are capability and power. Capability is concerned with knowledge-asset, skills, and activities needed for competence in achieving the defined scope. Power is needed for implementing and monitoring the architecture. The output of the IT strategy that would affect the other information strategy domains is the foundation. This is concerned with the ways in which the infrastructure is to be built. and the management of the architecture.

The last domain of information strategy is the IM strategy. Its components are 'roles. which are concerned with defining the responsibilities and authorities within and outside the IS function, and the relationships amongst those involved with the information strategy. The imperatives of this domain are the formal and informal organisation that is needed to fit roles and relationships. The output of the IM strategy is described as processes of constitution which are concerned with governing the IS function (Earl. 1996).

Forms of strategic planning:

Earl (1993)[7] identified five general approaches of strategic information systems planning (SISP) based on studying 27 organisations in the UK. These SISP strategies are the business-led approach, method-driven approach, administrative approach, technical approach, and organisational approach. A brief discussion of each is provided below.

The first approach is the business-led approach of SISP, which was adopted by six firms. This approach emphasises the role of the business in leading the SISP and not the other way around. The responsibility of the SISP lies with the IT managers who have to study the business plans of firms in order to produce the SISPs. There are problems associated with this approach, however. The goals of the business plans may not be clear or may be very broadly and loosely defined in such a way that they may not meet the requirements of the SISP planners. The remoteness of the users from the SISP may create implementation and inertia problems.

The second approach, the method-driven, was adopted by four firms. The adopters of this approach used formal methods and techniques for the formulation and implementation of SISP. Outsiders such as consultants may be invited to aid in formulating or implementing the method-driven technique due, to the lack of expertise amongst the firm's personnel in this area. One problem with the invitation of consultants is that their strategy might not be adopted, since it is perceived as the outsider's strategy. Moreover, the consultants' strategy may be unworkable since it may fail to consider the informal processes within the firm, it may be perceived as a threat to some of the personnel, or it may require high expenditure and hence be abandoned. The method-driven technique may have some strengths however, such as encouraging the firm to analyse in greater depth their IT requirements.

---

* cited in Currie (1995, pp. 37- 43)

34

The third approach to SISP is the administrative approach. It was found in five firms. The emphasis of this approach is on resource planning. The different functional areas may submit their IT requirements to a committee for evaluation based on a certain set of criteria. Problems with this approach may relate to the greater bureaucracy underpinning the SISP, lack of expertise within the committees to evaluate the strategic projects, which results in their decisions being restricted to narrow financial criteria, lack of creativity due to adherence to inflexible rules, inclination to select the cheapest rather than the more appropriate IT solutions, and possibility of inertial and political conflict among the management. The advantages of this approach, on the other hand, are related to encouraging personnel to understand how their systems operate, involvement of users and different functional areas in the proposals, which may have strategic implications, and enabling a tightening of the resource allocation procedures.

The fourth SISP approach is the technological approach, and it was adopted by four companies. This approach is technical in orientation. It aims to determine blue-prints or architecture for SISP. Its emphasis is on rigorous analysis and building a robust infrastructure. The disadvantages with this approach are as follows: it is time consuming, it may be too technical for the managers to understand, the plans may be rejected or only partially accepted, and they may impose rigidity on the business.

The fifth SISP approach is the organisational approach, and it was followed by seven companies. This approach emphasises the continuous integration between the IT and the other functions. Moreover, the process stresses the organisational learning as a means of developing SISP. The SISP is the responsibility of multi-disciplinary teams. The IT specialist plays an important role in these teams, advising business managers about the ways IT can be capitalised upon to serve their business goals. IT strategies are developed over a long period and they are approached in an iterative fashion from a series of sub-strategies. The author advocates the organisational approach over the other approaches since they have a higher success rate. The emphasis on the organisational approach brings us to discussing socio-political approaches to strategy formation.

Socio-political approaches:

The other school of thought which contrasts with the formal-rational approach to strategy formation, perceives strategy as an outcome of a social and political processes.

Cited in Fincham (1995), the processual perspective perceives strategy formation as a process of negotiation. Scholars like Mintzberg and Quinn stress the counter-rational reality in their approach to interpreting the nature of strategy formation. They describe strategy as emergent and incremental and being influenced by the flow of day-to-day operational decision making. Moreover, they reject the mechanistic distinction between strategy formulation and implementation. They perceive the two as intertwined and complex processes in which politics, value, culture and management style interact to shape the strategic action. Strategy, they contend, is formed rather than formulated and crafted rather than planned. More about Mintzberg and Quinn's work will be presented in the strategy chapter.

Fincham discussed the pluralist perspective which perceives organisations as encompassing political as well as rational action. This is traced in Burns' (1969)[8] early work. Scholars like Pettigrew (1987)[9] and Knights and Morgan (1990)[10] stress the role of micro-politics in shaping strategic decision making. Walsham (1993) stresses the need to understand the IS action from studying the different contexts that influence and get influenced by IS action. More about Walsham's work is discussed within the strategy chapter.

Currie (1995) reported findings of a number of case studies where IT strategies within firms did not follow the formal rational processes but were rather ad hoc in nature. These strategies were influenced by financial decisions rather than investigating the alternatives, and adopting the optimal solutions. The remainder of this section discusses

---

[8] Cited in Fincham (1995)

[9] Ibid., p. 12

[10] Ibid., p. 12

the nature of strategy formation based on empirical work reported by a number of scholars.

Knights and Morgan (1995) criticised the rational and the processual discourses as being ahistorical and failing to examine the diverse consequences of adopting a strategic approach. They contended that the genealogical informed analysis of strategy formation provides a more illuminating understanding of the strategic discourse. Knights and Morgan (1991) defined genealogical analysis as ".. an attempt to show that particular discourses are historically constituted by specific processes in which existing discourses are changed and adapted into a qualitatively different set of practices. Genealogical analysis is neither a 'history of ideas' nor a 'history' per se. Instead, it seeks to show how social relations of power and knowledge are reconstituted to create new ways of seeing and acting." (p. 254). Though the genealogical analysis does not claim that it exhausts all the determinants causing the strategic discourse, it aims to uncover those conditions without which the discourse might have not arisen.

Knights and Morgan defined two key levels to examine how strategic management emerges and becomes established in a particular organisational setting. The first level is concerned with examining the key conditions within the industrial context under which the discourse has developed. The second level of examination moves downward to the organisation setting to examine how the specific discourse is translated into specific practices.

The authors' article focuses, amongst other things, on examining the slow and uneven development of strategic management in the UK's financial services sector, and on providing an account of the conditions that made it possible and plausible for the strategic discourse to emerge within the insurance and pension industry. They wrote that, on the industry level, though there were many life insurance companies, the competition between them was limited prior to the eighties. These companies operated in an environment which they felt they knew and controlled. This environment was unproblematic and did not require the type of solutions that the strategic discourse claimed to offer. However, deregulation was brought to the financial industry during

the eighties and the associated changes in the environment constructed the need for a strategic change that emphasised competition rather than co-operation.

On the corporate level, Knights and Morgan studied the relationship between IT and corporate strategies in a life insurance company. They described the 'sudden incursion of strategic discourse' (p.208) through a new chief executive who in turn employed a former colleague to head the IS division. The new IS manager introduced new planning and monitoring mechanisms which were perceived as an aggressive approach as compared to that adopted in the industry. The case study then discussed the conditions that lead to sacrificing IT strategies for the sake of meeting short term goals or the political demands of influential managers within the organisation.

> ".. for here we find that when there is a conflict between an agreed strategy for IT systems renewal and the objective of retaining market share in pensions distribution, the IT strategy is put on the back burner. Yet paradoxically, it was the changing nature of the market and the regulatory conditions of financial services that had placed a strategic imperative on the demand for flexible and highly responsive information systems in the first place.. what our case indicates, however, is how quickly strategic commitments will be sacrificed in order to meet short-term sales targets or the demands of politically influential managers or functions in the organisation.." (p. 206)

Their case study provided an illustration of how strategic management developed in discontinuous, accidental, contested, and uneven ways as a result of varying interpretations, political processes, and short term interests of business. They believed that the strategic discourse and practice were in continuous flux, subject to change in meaning, and open to reinterpretation. According to Scarbrough (1997, p. 173), their model is a push model emphasising the push elements that bring the strategic discourse into the concerns of the management.

Scarbrough (1997) approached the issue of strategic IS from a social constructionist perspective. This approach, viewed in terms of the IS function, attempts to construct new ways of classifying and justifying IS initiatives. Such attempts are perceived as a response to the dynamic competition between the different expert groups, and a response to the uncertainty raised by the changing technological and sectoral environment. Scarbrough argued that the emergence, aim, and success or failure of IS projects were linked to the parallel new ways of classifying IS initiatives. Moreover, his

cases showed that the institutions and sectoral context as well as the internal structuring of expertise, especially the role of IS function within the management, play important roles in favouring or inhibiting the new categories of actions associated with the strategic IS.

The determination of the status of IS initiatives as strategic versus nonstrategic has implications for the management and the direction of the IS projects. Much of the literature, Scarbrough argued, handles this question from a normative rational perspective that bypasses the organisational processes involved in arriving at such a distinction.
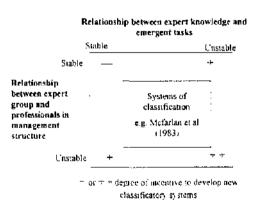
The factors that are behind the strategic classification of IS initiatives have theoretical and empirical elements. The theoretical element views the determination of the strategic status of IS as a socially constructed process resulting from the interaction of the IS expertise with the wider organisation. The theoretical element is tested empirically in a number of Scottish financial institutions. Scarbrough contended that the classificatory categorising of strategic IS is a social process involving the interaction of the differing expertise of those within the IS function, accounting, and general management. Scarbrough referred to social constructionism as ".. the way social actors construct the realities that confront them.." (p. 172), hence consensus and social acceptance are the most important validations of truth and claims.

Scarbrough argues that the social construction approach that he followed is concerned with the forces that 'pull' the strategic language and practices into particular contexts. He contrasted this with the 'push' forces of the institutional and discursive approaches. He argued that each used different instrumentalities. As to the social construction approach, the most important instrumentalities were related to the role of strategic/nonstrategic distinctions as a powerful system of classification. As demonstrated with Earl's framework of the frameworks, the discourse and practice of IS management is replete with frameworks and typologies that consultants and scholars in this field play a major role in refreshing. The frameworks play a role in imprinting the knowledge base of the professionals on the organisation's practices. The development

of classificatory frameworks is partly intellectual, and partly political. The interprofessional competition provides a second means for developing new classificatory systems. The expert groups seek to exploit the IS initiatives in ways that enhance their stature. Moreover, the strategic classification provides an incentive for realigning the relationship between the expertise in IS and other areas of expertise, particularly accounting- through, for example, enabling the relaxation of the accounting criteria and hence realigning the boundaries between IS and accounting. In addition to the above, Scarbrough contended that creating a strategic classification of IS projects enables IS experts to access the decision making arena that they were long excluded from, in addition to enabling the management of uncertainty associated with the advent of new technologies.

As mentioned earlier, the demand for strategic IS involves a tangling together of both political elements as well as technical ones. The IS/IT literature contains a lot of classificatory systems to determine the strategic status of IS/IT. Examples are the McFarlan and McKenney matrix (1983), as well as those of Porter and Millar (1985) and Wiseman (1985) which I discussed earlier. These classificatory systems may be used as cognitive systems for reworking the reality. The organisations may assimilate them only when specific social and economic conditions favour their adoption. Scarbrough developed a matrix defining the key social dimensions within which a

Figure 13: Social construction of classificatory

classificatory systems such as that of McFarlan et al might be adopted. The first dimension of the matrix is related to the relationship between the knowledge of the expert group and the emergent tasks confronting them. Where the relationship between the expert knowledge and emergent tasks is stable, the existing classificatory system is more likely to be entrenched. However, where the relationship between the expert

40

knowledge and emergent tasks is unstable, it is most likely that new classificatory systems be sought. The second dimension of the matrix is related to the relationship between the expert group and the other professionals. This relationship is contingent on the historical development of the sector and the organisation as well as the interprofessional competition. The stability or instability of this relationship determines the likelihood of entrenching the existing classificatory systems or searching for new ones. The matrix provides an exploratory map for the sociological analysis of classificatory systems.

In conclusion, Scarbrough's empirical work stressed the importance of social relations and expertise in empowering the adoption of new concepts and categories. Moreover, it contended that the ability to assimilate new information is dependent on the availability of prior knowledge and the diversity of expertise within the organisation.

Fincham et al (1994) studied the appropriation of technology and the development of strategy from a management of expertise perspective. In their theoretical framework (see Figure 14) they argued that in the short to medium term the available expertise influences the firm's strategies and decision making and

Figure 14: The Management of Expertise (Fincham et al, 1994, p. 5)

define the boundaries and limits of what their developments are. These decisions in turn affect the design and implementation of technology. The cycle is closed when the newly developed and implemented innovation adds incrementally to the existing expertise skills. In the long-term, the relationships between technology, expertise, and strategy unify thought and action.

Fincham et al. argue that the knowledge resources available to the organisation shape the development and implementation of organisational strategies, and the knowledge is embedded within networks of individuals and groups. Accordingly, the strategic practices around IT become less of a top-down initiative as they require the interaction

of expertise from different organisational levels which possess both the technical and organisational knowledge and as the intentions of top management are mediated by their dependence on the technical expertise of the IT and other groups. The organisation policies and strategies emerge as a result of a competition between claims and rival claims of these expert groups, and as they attempt to enrol others in the process of defining how the organisation should proceed. Through communication and alignment, a common vision and an alliance between the competing factions is reached and a strategy is shaped (Fincham et al, 1994, 1995).

The authors (ibid., 1994) argue also that the sector is constituted by the behaviour of networks of actors including the experts. The ideas about the opportunities within the market and the instrumentalities to exploit these opportunities may be channelled through these networks. Their influence on the organisational strategies may be determined by the extent that the interaction of networks are amenable to the local negotiation of the internal players.

Expertise has a number of dimensions. These include cognitive, political and economic ones. Cognitive knowledge may have different forms and may vary from formal knowledge, constituting the universal and generic aspects of expertise, to informal knowledge, representing the tacit knowledge generated by experience. The local knowledge of users, which is concerned with the idiosyncrasies of a firm's ways of doing things, may be regarded, as equally important as the universal and generic aspects of expertise. Therefore, the participation of the different players holding different knowledge in the development of IT systems is considered crucial. The different groups of experts within the organisation may compete politically to offer their services and establish their authority against others. The power struggle amongst the expert groups is influenced by a number of aspects. The acquisition of the required knowledge, the legitimisation of the claimed knowledge through, for example, professional accreditation, and the tradability of forms of expertise within the labour markets are factors that have an influence on the forms of expertise bargaining power.

The evolution of new bodies of knowledge and strategies is influenced by the ways in which organisations form and deploy expertise. The formation of expertise may take the form of employment of specialists, training and experience, and career development. Firms may develop in-house expertise or depend on the external labour markets as a means of gaining knowledge of newer techniques and alternative methods of systems development. The deployment of expertise may be achieved through collaborative networks which have formal aspects. such as hierarchical command structures, or informal communication lines.

To sum up the above argument, strategy and technology are perceived as a joint aspects of innovation, and effective formation and deployment of expertise is essential for the development of IT. The participation of the different expert groups in the development process results in opening up further contributions to the strategy. The process of developing IT is described in this context as part of a strategic interchange process (Fincham et al, 1995).

Role of social networks in affecting behaviour and economic action:

Are economic institutions formulated merely because of economic opportunities and pressures, or are they instead affected by the social relations that surround these economic institutions? Granovetter (1985. 1992) attempts to provide answers to the above questions through emphasising the role of social relationships in affecting economic institutions.

Granovetter claims that much of the literature written in this field is concerned with the oversocialized or undersocialized perceptions of human action. but both these perceptions of human action underestimate the role of social relationships in affecting these economic institutions.

In the undersocialized conceptions, it is believed that atomised actions on behalf of isolated individuals who struggle to pursue their self interests would mostly affect the formation of the economic institution's goals and activities. In contrast, the oversocialized conceptions stress the role of the norms and habits dominating the society in making the individuals behave in compliance with these norms. Both views rule out the effect of the social relations that affect economic institutions.

Granovetter's argument is between the two conceptions. He advocates that economic institutions' goals and activities be embedded within the social networks' goals and activities. These networks may provide the required backing that the economic institutions need to emerge and prosper thereafter, or instead constrain these institutions. Granovetter contended that these social networks play a role in creating trust and discouraging malfeasance in economic life. Both the undersocialized and oversocialized conceptions, he argued, fail to provide an explanation about the source of trust and malfeasance in the economic life. In addition to the above, Granovetter stressed the importance of social networks in determining whether the economic transactions be carried out within hierarchical firms or instead under market processes. The characteristics of these social relations or networks dictate the degree of trust and order that may accompany them. The pressure towards vertical integration represented in the hierarchical firms will intensify when these social networks are absent or when they produce disorder, malfeasance, opportunism and conflict. However, such pressure toward vertical integration would be absent when stable networks generate standardised behaviour between the firms.

As will be discussed in the case studies and the analysis chapters, the Bahraini banks maintained an intimate relationship with their vendors. These relationships were important channels through which tacit knowledge affected the banks' strategies. Furthermore, there were other formal and informal relationships with other institutions that affected the Bahraini banks' strategies.

Mintz and Schwartz (1985) provided an empirical study about the role of social networks within the banking industry in the US. The authors stressed the intimate

relationship between capital flows and directorate interlocks. The authors argued that financial organisations were mostly at the centre of these interlocks. The banks were eager to invite members from other organisations to sit on their boards. Similarly, they usually send their members to sit on other organisations' boards. Such arrangements provide the banks with a greater opportunity to widely scan the market and be able to process information that is crucial for decisions related to the flow of capital to the borrowers. Business relations as well as personal relations play a role in determining the members of the boards that would be invited to the organisation.

Swan (1996) stressed the importance of understanding the role of social networks in constructing, shaping and diffusing the required knowledge for innovation. These networks may be formally constructed between suppliers and customers, affiliated companies, between firms collaborating on projects providing mutual benefits, and so on. In other instances these networks may be informal. Professional associations provide an important means through which knowledge is transmitted.

The role of social networks is exhibited in the case study of Choi and Gannon (1996). They contended that high-technology firms were increasingly aligning themselves with financial institutions. They argued that "technology is driving the formation of strategies around strategic alliances" (p. 8). An action that was also exhibited by the banks in my case studies, Choi et al. reported that 15 banks aligned with IBM for proprietary development. The case study also reported alliances amongst the banks. Some of these banks offered services to other banks based on their expertise.

Institutional analysis of organisational behaviour:

This section of my literature review focuses on some of the scholarly work which explores the influence of institutions on organisational behaviour. It starts with a theoretical background of institutional theory then presents empirical work analysing the effects of institutions on banks' IT adoption behaviour.

In his article, "Unpacking Institutional Arguments", Scott (1991) argued that the most important contribution of the institutional theories was the reconceptualization of the different environments that organisations are embedded in. One facet of these environments that Meyer and Rowan (1977)[11] drew attention to was related to that in which the institutionalised beliefs, rules, and roles, which represent the subtle symbolic elements, play a role in affecting the organisation's forms independent of technical requirements and resource flow. They added that the more institutionalised the belief systems and 'cognitive categories' are, the more human actions are defined by 'taken-for-granted routines' associated with these categories or belief systems. Moreover, they argued that organisations may be subject to multiple institutional environments that may be in competition, if not in conflict, in defining what is perceived to be rational through understanding and interpreting the meanings associated with these institutionalised structures. Scott and Meyer (1991) differentiated between two sets of environments that impose different set of requirements on the organisations operating in them. They differentiated between technical environments and institutional environments. In the technical environments, organisations are rewarded by the effectiveness and efficiency in their production systems and work processes. In the institutional environments, on the other hand, organisations are rewarded by their conformity to the rules and expectation systems predominant in these environments. The technical environments and the institutional environments represent two dimensions in which organisations may vary. Scott and Meyer prescribed where organisations could fit on the institutional / technical dimensions based on the pressure and requirements imposed on these organisations by these different environments (see Figure 15). Based on this classification they identified four propositions defining the impact of these environments on the organisation's structures:

---

[11] Cited in Scott. W. (1991). Unpacking Institutional Arguments.

- "organisations in technical sectors will attempt to control and co-ordinate their production activities, buffering them from environmental influence.

Institutional environments

		Stronger	Weaker
Technical environments	Stronger	utilities; banks; general hospitals	general manufacturing
			Pharmaceuticals
	Weaker	mental health clinics; legal agencies; churches	restaurants; health clubs

Figure 15: combining technical and institutional environments (Scott and Meyer, 1991, p. 124)

- Organisations in technical sectors will succeed to the extent that they develop efficient production activities and effective coordinative structures.....

- Organisations in institutional sectors will succeed to the extent that they are able to acquire types of personnel and to develop structural arrangements and production processes that conform to the specifications of established norms and' or authorities within that sector."

In their article 'The Iron Cage Revisited ...', DiMaggio and Powell (1991) wrote that structural changes in organisations, especially those related to highly structured fields. are less driven by competitive and efficiency forces, and more driven by forces that make these organisations more similar without necessarily making them more efficient. DiMaggio and Powell identified organisational fields as "those organisations that, in the aggregate, constitute a recognised area of institutional life: key suppliers, resource and products consumers, regulatory agencies, and other organisations that produce similar services or products" (p. 65). A highly structured organisational field consists of organisations that respond to an environment which is made up of the organisations' responses to this environment. In the early phases, organisations may display variations in their forms and may be driven by initiatives to improve their performance. However, once the organisational field becomes well established and once innovation spread reaches a threshold point, an isomorphic process makes these organisations more similar and may constrain their options to change.

The process of isomorphism may take two forms: competitive isomorphism and institutional isomorphism. Competitive isomorphism embraces a rational system that emphasises the desire for achieving competitive and fitness measures. Competitive

isomorphism may apply to open markets in which free competition exists, and may provide an explanation for the behaviour of early adoption of innovation. However, it may not provide an adequate account of the modern world of organisations, DiMaggio and Powell argue. The institutional isomorphism may supplement the above view. It is driven by the organisations' desire to gain institutional legitimacy and social fitness.

DiMaggio and Powell identified three mechanisms through which institutional isomorphism is achieved. These are coercive isomorphism, mimetic isomorphism, and normative isomorphism.

Coercive isomorphism occurs due to formal or informal pressures on organisations by other entities on which these organisations depend for survival, or due to cultural expectations to which these organisations should adhere. Mimetic isomorphism is pursued when organisations model themselves after other organisations, which are perceived to be more legitimate and successful, to cope with uncertainty. Mimetic developments may have ritual aspects to enable those adopting them to gain legitimacy and to demonstrate that organisations are trying to improve their work conditions. Normative isomorphism stems primarily from professionalization. Shared norms may develop in centres such as universities and training institutions. Moreover, these norms and new work models may infuse across the organisations through professional networks and personnel filtering.

The three isomorphic processes can proceed without necessarily contributing to the organisations' efficiency. These isomorphic organisations may be rewarded due to their similarity to their population through, for example, enabling them to transact with the others, attract personnel, and gain resources due to the legitimacy gained from this isomorphism.

Scott (1995) wrote that institutions consist of three pillars: cognitive, normative, and regulative. These pillars interact collectively to shape social behaviour.

The closest to the rational paradigm is the regulative pillar, in which, social behaviour is controlled through a process which involves the capacity to impose rules, and ensure conformity to these rules through imposing punishments or rewards.

In the normative pillar, social behaviour is shaped by conforming to the predominant norms and values. The normative pillar (and the cognitive pillar) move away from the rational paradigm. Actors adopt these choices not to maximise their utilities but because they are expected to conform to these norms and values.

The cognitive pillar emphasises the importance of constitutive frameworks in defining the identity of the actors and defining the guidelines for appropriate choices associated with those identities.

The three pillars of institutions are embedded within different carriers. According to Scott these are cultures, social structures, and routines. Cultures, according to Scott, are carriers that rely on "interpretative structures- on codified patterns of meanings and rule systems" (p. 53). The interpretative schemes have a reciprocal relation with behaviour. They inform and constrain the behaviour and in the same time get shaped by it. The cultural systems may be interorganizational or they may pertain to a particular organisation or suborganisation. The second type of carriers are social structures. These represent patterned expectations connected with social networks. These social structures empower and constrain behaviour and at the same time are affected and reproduced by the behaviour. The third type of carriers are the routines, which represent habits, patterned activities and procedures which are based on predominant beliefs and knowledge.

Abrahamson (1996) studied management fashion and contended that it is influenced by institutionalised norms, among other things, as will be discussed next. He wrote that theories of fashion in aesthetic forms are used unmodified to explain management fashion. These theories argue that sociopsychological forces are mainly responsible for shaping management fashion. Abrahamson contended instead that fashionable techniques must appear as rational - prescribing efficient means to effective ends - and

progressive - adopting improved management techniques as relative to the older ones. Moreover, he contended that both sociopsychological forces, and technical and economic forces compete to shape the demand for management fashion. Fashions are in demand because they satiate the psychological needs of fashion followers, resulting from frustration and boredom, which may lead to striving for novelty and status differentiation. Fashions may also be looked at as gratifying psychological drives for individuality and novelty relative to those who are out of fashion, and at the same time, conformity and traditionalism by using techniques of those who are adopting the fashion. There will be a tendency for organisations of lower status to adopt these fashions to look like organisations of higher status and hence increase the homogeneity within the industry. Meanwhile, organisations of higher status feel that they are under pressure to seek newer fashions to differentiate themselves from organisations of lower status. Technoeconomic forces may also shape the demand for fashions. These forces may be related to macroeconomics fluctuations or political forces. The technoeconomic changes in the environment may create incipient preferences among fashion followers for certain types of techniques for narrowing the gap opened by the changes in the environment. Management fashion setters - consulting firms, business schools, management gurus, and mass media organisations - sense and satiate incipient demand for new types of management fashion, and at the same time they shape the demand for management fashions by articulating particular techniques that meet the incipient demand of the fashion followers.

Abrahamson also argues that management fashion is shaped by norms of rationality and progress. His theory is built based upon neoinstitutional theory, particularly that of Meyer and Rowan (1977). Meyer and Rowan argued that organisational stakeholders expect their organisations to be managed rationally through selecting the most efficient means to important ends. However, these means and ends may be ambiguous, and in these cases, managers must create the appearance that they are in line with the norms of rationality by adopting the management techniques that the organisational stakeholders perceive as the rational means to manage the organisation. Conformity with the rational norms may become essential to gain legitimacy from the stakeholders and hence gain

their support to enhance their organisation's survival. Abrahamson extended Meyer and Rowan's argument by contending that it is not just norms of rationality but also norms of progress which govern management behaviour.

To sum up, management fashion is shaped by sociopsychological and econotechnical forces, the demand of fashion followers and the supply of fashion setters, and institutional pressure to conform to the norms of rationality and progress.

A case study of change and industrial response.

Morris et al (1996) presented a case study about Midland Bank's innovation of re-engineering its cheque processing. Midland's initiative took place as a result of a number of factors related to pressure for cost reduction, especially after it had experienced a reduction in its profitability, and a change in the top management, many of whom were recruited with experience of the US market. The bank's centralised processing system was considered as a success to which top management commitment, project management, past experience of centralisation, human resource management, and internal marketing all contributed.

Morris et al. questioned the reasons behind the lack of exploitation by other banks of this innovation though it proved to be cost-efficient and had other quality benefits that could be applied to other projects such as card vouchers processing. To understand the banks' behaviour, Morris et al argued that we need to explore the managers' assumptions about the process of technical change, and about the sources of competitive advantage.

As discussed earlier, DiMaggio and Powell (1991) described the banking industry as a highly institutionalised field. The organisations within this field, according to the institutional theory, tend to seek survival and stability through adopting the prevailing norms. These prevailing norms and taken-for-granted assumptions work as a force spurring the organisations in this field to homogenise. Moreover, these conventions and taken-for-granted norms create a high psychological switching cost. To overcome the

psychological switching cost, change has to challenge the prevailing norms and conventions. A major implication of institutional theory is that IT innovations depend on how well they fit the conventions and norms, in addition to the anticipated competitive benefits. There are areas of similarity amongst the banks that can't be explained with reference to costs. For example, they tended to compete using more or less similar approaches such as expanding their retail network rather than differentiating their services, and covering broadly the same market segment and providing similar products with a similar charging structure. In terms of innovation, the banks have moved more or less at the same pace despite their differences in suppliers and architectural specifics. The industry norms with regard to processing innovation favoured collective management of such projects. As for Midland, change occurred mainly because of the bank's crisis, new recruits in the top management who possessed different point of views and were exposed to different standards and norms due to their past expertise outside the retail banking and the UK market, and an ability to sell the new innovation internally. As for the other banks' disinclination to copy Midland's innovation, it reflected the other banks' leaders' perceptions about the nature of competition. The banking community did not perceive back-office processing as a source of long term competitive advantage despite the amount of savings derived out of it. Moreover, Midland Bank was not perceived as a benchmark exemplar, and much of what it had done was not consistent with the industry norms.

This case demonstrated that technical innovation may be resented, despite its technical and financial benefits. Moreover, Morris et al argued that banks tend to move cautiously, avoid using untried technologies, innovate in broadly similar ways, and distrust firms that do not have a successful financial history.

Organisational change and inertia:

The previous arguments which I presented within the literature review discussed the push or pull forces influencing the adoption of IT. The following argument explains the stickiness within industries or organisations that may inhibit or slowdown organisational change.

Hannan and Freeman (1989) argue that organisations are characterised by relative inertia in their structure. The pressure for this inertia emerges due to internal and external factors. High sunk costs, immobility of resources, and internal politics are among the internal factors that cause inertia. On the other hand, legal constraints on entry and exit, high costs of obtaining information related to the external environment, and a fear of losing legitimacy when incurring a major change are some of the external factors that cause inertia.

Arguing that there is a strong inertia in the structure of the organisation does not mean that there is no change at all in the organisation, but instead it may mean that the changes in the organisation may happen at a slower rate than those of the environment.

Hannan and Freeman argued that the selection process prefers those organisations that are reliable and accountable to those that are not. Reliability and accountability require the organisation to be able to maintain its structure. In this case the very factor that allows the organisation to be more reliable and accountable causes inertia in its structure.

levels of inertia may vary within the organisation. It is expected that the level of inertia is greater in the core levels of the organisation than the peripheral parts. Inertia is also believed to increase as the organisation grows in age. The older the organisation is, the more it is able to reproduce its structure than younger organisations. Reliability and accountability increase with age, and as a result the mortality rate decreases. Hannan and Freeman did not provide a determinate relationship between the size of the organisation and the rate of change. On one hand, it is believed that inertia will be

higher in larger organisations, but on the other hand, these large organisations possess the required resources to implement successfully these changes more effectively than smaller organisations.

Quantitative empirical work within the strategic information systems / technology (IS/T) field:

In addition to the above qualitative empirical work, e.g. Fincham (1994), Scarbrough (1997), and Knights and Morgan (1995), there have been a number of quantitative studies, many of them conducted by Ph.D. students. Most of these quantitative studies. I argue, are narrow in scope. For the sake of completeness, I report them here but I have not found them helpful in contributing to the qualitative empirical work reported earlier.

Chung (1991) studied the relationship between the structure of information system technology (IST) and competitive strategy. The Miles and Snow strategic typology was selected as the base for the competitive strategy dimension. This typology classifies strategies into four basic types which are prospectors, defenders, analysers, and reactors. Since, by definition, a reactor strategy lacks any consistent reaction to the environment. it is not included in this study. What follows is a definition of the other three types of strategies:

> "A prospector is an organisation with an aggressive competitive strategy that attempts to pioneer in product · market development"

> "A defender has a tendency to maintain its present products or customer base. with little new product development in efforts to secure niches within its industry"

> "An analyser tends to have organisational attributes that combine those of defenders and prospectors"

As to the IST structure dimension, the degree of centralisation of IST and the degree of integration of IST have been selected as two of its components. The degree of centralisation refers to the extent to which the development and implementation

activities within the organisation are centralised in one control location. The degree of integration is measured by horizontal integration and vertical integration. Horizontal integration refers to the exchange of data across applications, while vertical integration involves access to operational and managerial strategic data in the same system. The research findings indicate that there are significant relationships between the organisational competitive strategy and IST structure, and this relationship affects the competitive advantage of the savings institutions which where the subject of the study. Centralisation and integrated applications were associated with the defender strategy. Decentralisation and less integrated applications of IST were associated with the prospector competitive strategy. In addition to the above, the findings revealed to mean that each strategy type was equally effective in the savings institutions, and were interpreted that each of the strategies may lead to a competitive advantage once these strategies are effectively implemented.

Zahir's (1992) empirical work examined the effects of IT on performance and the need to align organisational processes and structure with IT. His literature review reported that there was a controversy about the effect of IT on performance at the economy level as well as the firm level. Some of the literature reported negative effects of IT on performance, others reported no effect of IT on performance, while others argued that IT has a positive effect. According to Scott Morton (1991), those firms that demonstrated a positive impact from major IT applications must have successfully transformed themselves in terms of business processes and structure. This approach has its roots in the structural contingency theory that assumes that organisational performance depends on the coalignment and fit between organisational structure and the context of the organisation that includes the culture, systems, and technology. Moreover, the coalignment must also be between the organisational factors and external environmental conditions in order to achieve a superior performance. However, some of the literature indicated that there is a direct effect of IT on performance.

The empirical study failed to support any positive direct effects of IT on performance. Moreover, it failed to support the proposition that IT has indirect and positive effects on

performance which is mediated by changes in the organisation's structure. The researcher attributed his second finding to the small size of companies surveyed which did not allow an explicit modification in their structure as a result of introducing a major IT application. The empirical work supported the proposition that IT has an indirect and positive effect on performance which is mediated by changes in the organisational processes. This finding emphasises the importance of introducing the appropriate modification to the organisational processes for exploiting the potential benefits of IT.

Peffers (1991) investigated the effects of adopting ATMs on a number of issues. These ranged from studying the effect of early adoption of the ATMs on the market share, the effect of the adopter's size on the market share, the sustaining of the adoption effect, the impact of the ATMs on efficiency, and the effect of the adopter's size on efficiency. The finding of this empirical work is summarised below.

- Relative to non-adopters, all but small banks gained market share due to the adoption of ATMs;

- When comparing the earliest adopters with the later adopters, larger banks gained more than smaller banks. The smallest banks neither benefited nor lost relative to the non-adopters because of being the earliest adopters.

- Market share gains lagged behind the adoption of the ATMs. For a medium sized bank, the lag was about four years.

- The effects of the ATM adoption on efficiency was much weaker than the effects on market share.

- The ATM adoption affected strongly the business level measure, i.e. income.

- The adoption affected all but the very smallest banks.

- Large banks gained more than small banks.

- The earliest adopters were more positively affected than later early adopters.

- The effect on income lagged behind adoption by four years and then it started to increase over the performance measure period.

The above were quantitative positivist research studies which focused on studying narrow aspects of IT adoption behaviour within the financial services sector. They studied the relationships between a number of variables and went no further than analysing the statistical association between these variables. As I have argued in the methodology chapter, a case study approach which is based on understanding how the participants in the financial services sector construct their realities and behave accordingly, and which aims to understand the different contexts of the phenomenon under investigation would provide richer insights than a narrowly focused superficial quantitative approach.

Conclusion:

The chapter started with discussing the rational perspective which attributes a strategic role to IT and perceives the organisation as being consistently concerned with maximising its utility through exploiting IT as a strategic resource. Belonging to this school, the MIT research, reported at the beginning of the chapter, studied the impact of IT on organisations in the 1990s. This research project generated a map of the terrain comprising five levels of IT-induced configuration with increasing levels of business transformation and potential benefit from IT. A UK study on the applications of IT in the UK financial services sector was then reported. This study revealed that radical IT developments could transform not just the businesses but also the industry structure as a whole. In addition to the above, the chapter reported the work of scholars propagating how managers might act rationally in their pursuit of competitive advantage from IT. An example of these scholars, was Earl's 'framework of the frameworks' that aimed at guiding managers in this direction through drawing attention to the need for awareness.

opportunity and positioning. The thesis also discussed several rational approaches to IT strategy formation. In passing, I referred to the problems associated with the above rational frameworks and models as had been reported by Dole (1991).

A major critique of the rational perspective is that it pays too little attention to the influence of the social, political, and cultural factors over the process of strategy formation and development including that of IT adoption. These perspectives are addressed in the fields of strategy and organisational sociology. Therefore, the second part of the chapter focused on the theoretical and empirical studies that recognise cultural and political influences on organisational and strategic decisions, including those related to IT. Some of the key concepts, reported in this part of the chapter, include the need for a genealogical analysis to understand the strategic discourse through uncovering the conditions without which this discourse might have not arisen. Another approach to studying strategic IS was through the social constructivist perspective propagated by Scarbrough which recognises the influence of the interaction between the experts and professionals and the emerging knowledge in inhibiting or favouring a given IS strategic discourse. The management of expertise is another approach reported, studying the strategic discourse through exploring the relationship between expertise, strategy, and technology. Other key concepts paid attention to the institutionalised patterns of behaviour, the behaviour of networks of actors, and the consequences of organisational inertia for the strategic discourse and IT adoption decisions.

Without complementing the rational perspective with the socio-cultural, political and institutional perspectives, I argue that our understanding of the strategic IT discourse would remain immature. This has led me to extend my literature review over these school of thoughts, aiming to provide a holistic approach to studying the strategic IT adoption, and provide the needed sensitivity for analysing the qualitative data gathered from field work.

Chapter three

Research Methodology

Introduction:

This chapter discusses the research methodology and the path that I followed in conducting my empirical work and analysis. This process was emergent, as will be discussed in the coming sections. The chapter discusses the aim and objectives of the thesis, the qualitative approach, the nature of the empirical work, the data analysis, the use of computer software in the analysis process, triangulation and limitations.

Aim of the research:

I started my research project with a broad area of inquiry related to understanding and providing an account of information technology adoption within the Bahraini banking industry. At the outset of my research project, I did not adopt any frameworks to test as I believed that most of these were developed in cultures that differ from the one that I was inquiring about. To clarify this point further, I would like to quote the following analogy:

> "The *tabula rasa* approach reminds me of the story of a detective who was following a suspect along a street at night, and the suspect dropped something in the gutter at a dark point in the road. Finding this action suspicious and suspecting that some vital evidence had been dispensed with, the detective decided to look for it. However, it was too dark to see anything at that point, so he moved further down the road to where there was a street-lamp, and looked for the evidence there!... he will never find what he is looking for. It would be far better to get down on his hands and knees and feel around in the dark." (Dey, 1993, p. 228).

My inquiry, then, was inductive and aimed to explore and describe the adoption behaviour of those banks based on what they were doing rather than verifying any hypotheses. To further borrow from Dey (1993, p229), I started my inquiry with an open mind rather than an empty head. The literature that I had reviewed prior to the field work acted like the 'lenses' or perspectives for perceiving the empirical world (Seidel et al, 1995, p. 56).

I focused on the following objectives as I immersed in the field work. These objectives aimed to:

- understand the process of IT strategy formation within the different banks;

- understand the role of the different stakeholders in shaping the banks' IT strategic vision, including that of the vendors, consultants, and other role model banks;

- understand the role of IT. and the drivers of IT strategies and initiatives as perceived by the informants;

- understand how the banks approach collective IT projects if any; and

- understand the influence of the banks' cultures on their IT strategy / adoption initiative.

Qualitative approach:

I adopted a qualitative approach to my inquiry as I believed that this approach was more suitable to the type of investigative questions I raised above.

Denzin and Lincoln (1994, p. 107) argued that quantitative research may strip from consideration other variables that, if considered, may alter the findings. Qualitative data through providing contextual information may 'redress' that imbalance. Moreover, imposed theories or hypotheses - as in quantitative approaches - may have little meaning within the insider views of the studied entities. Whereas qualitative data are useful for uncovering insider views. They argue also that qualitative data are more capable of providing insight into human behaviour, as they are more connected to the meanings and purposes the human actors attach to their behaviour.

Table 1 summarises the characteristics of qualitative research.

Table 1: Characteristics of qualitative research (cited in Silverman, 1993, pp. 20 -29)

Bryman (1988)	Hammersley (1990)	Hammersley (1992)
• ".. taking the subject's perspective • Describing the mundane detail of everyday settings • Understanding actions and meanings in their social context • Emphasising time and process • Favouring open and relatively unstructured research designs • Avoiding concepts and theories at an early stage"	• "The use of everyday contexts rather than experimental conditions • A range of sources of data collection (the main ones are observation and 'informal conversations') • A preference for 'unstructured' data collection (no prior hypotheses, no prior definitions) • A concern with the 'micro' features of social life ('a single sitting or group') • A concern with the meaning and function of social action The assumption that quantification plays a subordinate role"	• "A preference for qualitative data - use of words rather than numbers.... • A preference for naturally-occurring data- observation rather than experiment, unstructured versus structured interviews... • A preference for meanings rather than behaviour - attempting 'to document the world from the point of view of the people studied'......... • A preference for inductive, hypothesis-generating research rather than hypothesis-testing.."

Berry (1993, p. 225) argues that "Qualitative research is ... best used for problems where the results will increase understanding, expand knowledge, clarify the real issues, generate hypotheses, identify a range of behaviour, explore and explain individual motivations, attitudes and behaviour....".

Based on the above, I argue that the qualitative approach suited my research requirements since I was concerned with understanding as well as describing the phenomenon under investigation. Issues such as the banks' cultures and their relationship to IT adoption emerged from analysing the informants' narration. As will be described in the case studies and the analysis chapters, I identified different cultures based on the metaphors and analogies the interviewees used in their discussion. Such metaphors and analogies were rich in presenting these organisations' world views and

how these world views were interlinked with their adoption behaviour. Adopting a qualitative approach enabled the capture of subtleties within these institutions.

Disadvantages of a qualitative approach:

My experience in adopting a qualitative approach is consistent with that reported in the literature about the disadvantages of adopting this approach. Miles (1979) and King (1994), for example, argued that the process was very labour intensive and time consuming. I found this to be very true during all the phases of conducting the qualitative approach. Arranging and conducting the interviews were very time consuming. Transcribing was another labour intensive operation that consumed much of the researcher's time. The output of the transcribing process was an overload of transcripts. Exploring the different possible ways of coding these transcripts, writing up the case studies and creating matrices to enable cross case study analysis contributed to the labour intensive process.

Another criticism of the qualitative approach is the high level of subjectivity associated with it. Elaborating on this disadvantage, Miles (1979) writes that :

> "the analyst faced with a bank of qualitative data has very few guidelines for protection against self-delusion, let alone the presentation of "unreliable" or "invalid conclusions to scientific or policy-making audiences." (590).

While subjectivity is an inevitable feature of qualitative research, there are a number of steps that can be taken to minimise its effect. Conducting several interviews with several different informants in each organisation. and careful documentation of the materials allowing the reader to judge the writer's possible biases, were two steps used in the present study.

Conduct of empirical work:

The aim of this section is to map the path that I have taken in conducting my empirical work. The process took the form of inductive learning, starting with a blurry vision leading me on many occasions into blind alleys that forced me to take U-turns. In other instances, I set out take short cuts that proved to be long ones. Marking my footsteps in this 'journey', I claim, is not any less important than arriving at my destination, for it demonstrates how the inductive learning evolved.

Pilot studies:

At the outset of my research project, I conducted two pilot studies. The first pilot study was conducted in Scotland with three banks. The informants that I interviewed were a senior manager- in Automation. R&D; a manager from Migration Strategy Planning; and two senior managers working with a major IT project. Yin (1994) says that "the pilot case may be chosen for several reasons unrelated to the criteria for selecting the final cases in the case study design. For example, the informants at the pilot site may be unusually congenial and accessible, or the site may be geographically convenient, or it may have an unusual amount of documentation and data...... in general, convenience, access and geographic proximity can be the main criteria for selecting the pilot case or cases." (pp. 74, 75). The accessibility to the three Scottish banks encouraged me to conduct the pilot studies then. At that early stage of my research project, these pilot studies were experimental and of a 'laboratory role' aiming to provide me with insights about the possible approaches to my research project.

I conducted the second pilot study with three banks in Bahrain, and it took around three months in 1994. I concluded that it was not feasible to adopt a quantitative approach to survey the 19 commercial banks in Bahrain, as I suspected that the response rate would be very low and that would disable any statistical generalisation. Moreover, I decided, based on the second pilot study, to focus my thesis on the Bahraini market and discard

the British market as it was easier for me to access Bahraini banks than British banks. The pilot studies were based on semi-structured and unstructured interviews with informants within the three Bahraini banks.

Main field work:

In the main field trip, which took place between September 1994 and March 1995, I interviewed informants from eight banks- three local banks, and five branches of foreign banks- which brought the total number of banks that I interviewed in the second pilot study and the main field work to
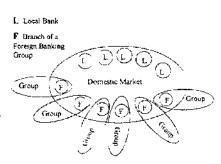
Figure 1: Banks participating in my field work

eleven banks. The local banks operated mainly within the domestic market (though some of these banks had had limited international operations), whereas the foreign branches were part of a global network of branches operating internationally (see Figure 1). The informants within these banks were either part of the strategic apex or linked to it. In three of the eleven banks, I managed to interview the general managers. The interviews of a total number of 32 informants were analysed [1] (see Table 2). Since I used similar methodology in both the second pilot study in Bahrain and the main field work. I included the second pilot data in the main study, and therefore the conclusion that I arrived at from the eleven banks was reasonably valid.

---

[1] I interviewed other informants. However due to the time limitations I have had to discard these interviews.

Table 2: **Informers' positions**	Bank
CEOs	L2. F3. F4
Support Units: Strategic planning senior managers; IT managers; operations managers; services managers and information management managers	L1, L2, L3, L4 (two informants), L5 (three informants), F1, F2, F3, F4, F5. F6 (two informants)
Business units: Head of SBUs and other vice presidents and senior managers	L2, L3 (two informants), L4, L5 (three informants), F2. F3 (two informants), F4, F5, F6 (two informants)

Maykut et al (1994) defined eight characteristics of qualitative research. Amongst these characteristics are the emergent designs of qualitative research and purposive sampling. To quote Maykut et al:

"Any student or researcher can, however, appreciate the experience of carrying out one's research study and discovering a feature for which one's research design did not allow consideration. It is this very notion of pursuing important or salient early discoveries that undergirds qualitative approaches to inquiry. Important leads are identified in the early phases of data analysis and pursued by asking new questions, observing new situations or previous situations with a slightly different lens, or examining previously unimportant documents. This broadening or narrowing of what is important to study ... and the consequent sampling of new people and settings is anticipated and planned for, as best one can, in qualitative research designs." (p. 44)

My interviews in some banks led me to information about different patterns worthy of investigating in other banks, where I later conducted interviews. For example. I interviewed Local 1st based on my interview with the IT manager in Foreign 6. These two banks differed in their IT adoption approach. I was interested in understanding the processes that led these two banks in their adoption and strategy development behaviour. Accordingly my (sample) evolved over the course of study.

The interviews with some of the banks widened the scope of inquiry. I sensed important forms of relationships between some of these banks and other organisations, e.g. vendors and consultants, which affected the banks' IT strategies / adoption decisions. Accordingly I approached four of the main IT vendors inquiring about their role in

influencing the banks' adoption decisions. These informants were managers in direct contact with the banks. In addition to the vendors, I interviewed one consultant after his bank client had mentioned the consultant's role in formulating their strategic plans.

One of the banks mentioned their initiative to launch a shared network amongst the banks. This story opened a new line of inquiry for me where I investigated the banks' attempts to redesign their business network based on using IT collectively. I managed to get different views about this issue from the different participants that had had a stakeholding interest in the project, which I put together to permit the version of the story reported here.

During the main field work, I did not waste any opportunity to speak to informants within the financial sector. I was aiming then to explore the different faces of the phenomenon under investigation. Some of these interviews were discarded, however, as they were not closely linked to the themes I developed later on, e.g. the interview with American Express.

Collective case studies:

Stake (1994) discussed three types of case study - the intrinsic case study, the instrumental case study and the collective case study. The intrinsic case study is selected when the focus of the inquiry is to understand a particular case. In contrast, the instrumental case study aims to provide an insight into an issue or a phenomenon - the case itself is of secondary interest. In the collective case study design, the case studies aim mainly to provide a better understanding of the phenomenon in a larger setting of cases. Duncan (1997) writes that the selection of cases or sites is based on theoretical rather than statistical considerations. Moreover, these cases may be selected to represent the polar extremes of a phenomenon for example.

I opted for a collective case study design through selecting the extreme polar of the phenomenon to enhance my understanding. Following is an example of these polar extremes of the adoption behaviour within the banks:

- Nature of strategy formation process

    - locally formulated vs. imported

    - formal vs. ad hoc

- Relationship with the vendors:

    - intimate-strategic vs. threatening

- IT/IS application development practices:

    - in house vs. 'off-the-shelf'

- The above forms were embraced within

    - local banks vs. Foreign banks

    - small banks vs. Big banks

Method of data collection:

Yin (1994) defined six main sources of evidence for building case studies:

> "documentation, archival records, interviews, direct observations, participant-observation, and physical artefacts" (p. 79).

I depended heavily on interviews as the main source of data collection. Walsham (1995) argued that interviews are the primary source of data collection for interpretative case studies when the researcher plays an outside observer role. The interviews enabled me to access the informants' different interpretations about the phenomenon under investigation. Moreover, I was able to draw pictures of their cultures based on the narrative stories, the expressions, and the metaphors that they provided in the interviews. This would be less possible to comprehend with other means of data collection. I have to say, however, that my construction of the story was highly influenced by my subjectivity and my understanding of their stories. In line with my argument, Van Maanen (1979)[2] calls the interviewee's data first order data and the constructions of the researcher second order concepts.

Role of the researcher:

Walsham (1995) identified two roles for the researcher, as an outside observer or an involved researcher. I played the role of the outside observer where I visited the informants in their natural environmental settings. The advantage of adopting this role according to Walsham is that the researcher is not perceived as having a direct personal stake in the interpretations or outcomes and therefore the interviewees would be more open to air their interpretations given that enough trust is developed between the interviewer and the interviewee. The disadvantage of this role, however, is that the researcher is not present in the organisation on many occasions and may fail therefore to develop a direct sense of the inside world of that organisation. Moreover, important aspects related to his research topic may be not shared with him because they may be perceived as too sensitive or confidential to be shared with an outsider.

---

[2] Cited in Walsham (1995, p. 75).

Degree of interview structure:

I developed different lists of questions that aimed at guiding my interviews. These questions were not meant to be restrictive but rather to provide guidance to the interview should there be a need for it (copies of these questions are provided in the appendix). King (1994) argued that qualitative interviews are not relationship-free. I experienced this in my interviews. Trust developed with some of the interviewees. These interviewees actively shaped the course of the interview, going beyond the questions that I prepared to provide me with an insight into the phenomenon under investigation and pave the way for approaching other banks or other organisations, as mentioned earlier.

In other settings, I failed to achieve the same 'intimate' relationship with the interviewees. In such circumstances, the interviewees usually "..seek to get the interview over as quickly as possible, with enough detail and enough feigned interest to satisfy the researcher that he or she is getting something of value but without saying anything that touches the core of what is actually believed and cared about in the research.." (Easterby-Smith et al, 1991, p. 77).

Other sources of data:

In addition to the interviews, I used other secondary sources for collecting data. These were consultants' reports, annual reports and, to a lesser extent strategic planning documents..

Methods of capturing the data:

Most of the interviews were tape recorded. According to Patton (1980)[3]:

"A tape recorder is part of the indispensable equipment of evaluators using qualitative methods. Tape-recorders do not 'tune out' conversations, change what has been said because of

---

[3] Cited in Hart (1987, p. 290)

interpretation (either conscious or unconscious), or record words more slowly than they are spoken. In addition to increasing the accuracy of data collection, the use of a tape recorder permits the interviewer to be more attentive to the interviewee. (P. 247)".

The main disadvantage of this method of data capture, however, was the discomfort that a number of interviewees felt in the presence of this machine. Some of these informants requested that I switch off the tape recorder whenever they wanted to keep issues that they perceived as sensitive off the record. Others provided me with a shallow type of data when been tape recorded. However, through the informal discussion that took place prior or after the formal interviewing. these informants were more willing to share their experience in the absence of the tape recorder.

Some interviewees refused to be tape-recorded, and I had to rely on note taking. A main disadvantage of this means of capturing data is that the interviewer needs to be professional and fast enough to capture as much data as possible, which I found to be very difficult to do. I therefore argue that tape recording, which the majority of the informants accepted, was essential for capturing the data without losing any of them. Moreover. the tape recording technique allowed me to use Nud.Ist in the analysis process.

Data analysis:

There are no "off-the-shelf" rules for analysing qualitative data. King (1994) pointed out that the notion of producing a "cookbook" of instructions contradicted the flexibility and openness of the qualitative research methodology. Nonetheless, the literature suggests some broad guidelines. Huberman and Miles (1994). for example. prescribed four iterative stages for data analysis which are data collection. data reduction, data display and conclusion drawing and verification. Dey (1993) provided the following metaphor to describe the process of data analysis:

He described the process as iterative, starting with the data and then flowing to describing, classifying, connecting, and producing an account (pp. 30 -62).

In the following subsections I provide a description of the steps that I went through in my analysis.

On-site reflection:

Though I did not start formally analysing my data until I had returned from the field work, the informal analysis - in the form of informed intuition - started while I was conducting the field work. As I mentioned earlier, I sensed the need to inquire about the role of the vendors in shaping the banks' adoption decisions and hence I approached the vendors. This objective evolved as a result of interpreting the narration of some of the bank informants. Other issues that I inquired about as a result of early analysis were the shared network project and the role of the different stakeholders in this process, and the different approaches in adopting / developing the strategies of IT which led me to selectively include certain banks in my sample.

Transcribing the interviews:

The formal analysis of the qualitative data started with transcribing the interviews. Emphasis has been made in the literature on this process, to quote King (1994):

"This discussion of data analysis makes the assumption that the researcher has available full transcripts of interviews. Difficult and time-consuming though transcription is, there really is no satisfactory alternative to recording and fully transcribing qualitative research interviews." (p. 25)

The transcribing process was a very labour intensive work. The time required to transcribe each hour of an interview may vary. For example, Hart (1987) reported that transcribing an hour of the interview would require four hours while Pidgeon at al (1996) reported that it would take from eight to ten hours to transcribe an hour of a tape. It took me around fifteen hours to transcribe an hour of a recorded interview. The informants' accent[4] was an important factor in determining the speed of transcribing. For example, I interviewed Bahrainis, British, Indians, Pakistanies, Canadians/Americans, and informants with a Chinese accent - of Hong Kong nationality. The hardest and most time-consuming to transcribe was the Chinese accent.

I invested in a good quality tape recorder with a microphone sensitive enough to pick up interviewee responses and filter away any noise in the surrounding environment. This investment paid off by providing good quality recorded interviews, which eased, to some extent, the agony of transcribing.

Nature of qualitative data:

The data I obtained from the field work were like snapshots (see Figure 2). Some of these were static in nature, for example, reporting an attitude or a perception about a given issue or a remark about an event. These databits often did not form a complete or inter-linked story. In other instances these snapshots or databits were related to a chronological event or events
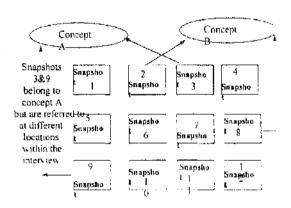
Figure 2: Snapshots or databits and their relationship with concepts in the transcripts.

that had happened in the bank. Nonetheless, the informant talked about these events a bit here and a bit there whenever he remembered something related to the topic that he

[4] Most of the interviews were conducted in English as it is the official language amongst the banking community in Bahrain. There were very few interviews that were conducted in Arabic.

had talked about previously. The raw data were messy and unorganised which spurred me to consider using an automated means to manage my 'messy' qualitative data.

Computer-aided approaches:

Before I continue describing my analysis process, I would like to provide a brief background about the use of computers in qualitative data analysis, followed by a description of Nud.Ist which I used in my analysis.

Richards et al (1994) discussed the different groups of computer application programs which are used in qualitative data analysis. These programs are based on the concept of the code-and-retrieve feature, which is the minimum facility that these programs provide the qualitative researcher for managing and analysing his/her qualitative data. Richard et al argue that the code-and-retrieve method enables theory to emerge. This can be done through an iterative process of assigning labels or codes to concepts emerging from the data and then exploring the relationship between these concepts. The output, from studying the text, assigning concepts to it, exploring the relationship between these concepts, and linking them can be re-fed into the computer database for further examination and analysis, a process which they called 'system closure'.

Richards et al grouped the qualitative data analysis application programs into the following groups:

- Code-and-retrieve. This group of application programs enable the researcher to assign codes to databits within the text and then retrieve them. An example of this type of software is Ethnograph. The software enables, among other things, retrieval based on Boolean searches, supports managing the documents into sets called catalogues and then restricts searches to certain catalogues, and displays occurrence of codes in files of specific text portions.

- Rule-based, and logic-based theory building systems. These two types of program enable more explicit developing and testing of theory. The rule-based systems provide advanced code-and-retrieve functions such as searching the text and then "autocoding" the findings. It allows theory testing through Boolean searches for co-occurences of codes. Moreover, it allows system closure through referring the outcome of the searches back into the system. These features are performed by production rules in the form of "if conditions C1 to Cn hold for some data, then perform action A on the data" (p. 455). An example of this type of software is HyperResearch.

  The logic-based systems provide more sophisticated features such as theory generating and testing. AQUAD is an example of this type of software. It enables linkage analysis through, for example, searching for positive and negative cases that are located within certain distances within the text, e.g. "to what extent do codes A and B occur within textual distance d" (Richards et al, 1994, p. 456). Sophisticated users can use the logic programming language 'Prolog' in designing their search routine and in testing their hypotheses.

- Network systems. These systems allow the presentation of theory in the form of nodes that are represented in the form of a tree or a hierarchy of concepts with different levels of abstraction. These systems allow the retrieval of data from these nodes at the different hierarchical levels and enable system closure. Examples of these systems are Nud.Ist and ATLAS/ti (Kelle, 1995, p. 12).

Among the above systems, Ethnograph was the least sophisticated system and might have been sufficient for my data management requirements. However, I used Nud.Ist mainly because it was being used in the University of Glasgow, a factor that I considered should I need any practical help. In addition to that, the developers of

Nud.Ist in cooperation with Cranfield University were active in promoting and supporting the software, which in turn positively affected my decision to use it.

Description of Nud.Ist:

Nud.Ist consists of two main systems, the document system and the index system. Within the document system, the researcher can introduce his documents and perform search and retrieve techniques on these documents when needed. With the index system the researcher can conceptualise the main themes and represent them by nodes arranged in a tree or a network of hierarchy structure. Each of these nodes can index databits within the documents stored in the document system. The researcher can perform sophisticated searches within the nodes of the index system and then place the findings of these searches into nodes that can be used for further searches and analysis.

Use of Nud.Ist in the analysis process:

One of the drawbacks of qualitative research is the huge and messy data sets that researchers have to handle. I therefore attempted to embark on using a computer system, Nud.Ist, to help me in organising my data.

To analyse the qualitative data, I wanted to break down the data into databits and then relate these databits to concepts or categories. This process required great familiarity with the data at hand. Moreover, it required going backward and forward between the text and the categories that represented the conception drawn from the databits of the text.

Dey (1993. p. 100) suggested the following possible sources for generating categories:

- "Inferences from the data

- Initial or emergent research questions

- Substantive, policy and theoretical issues

- Imagination, intuition and previous knowledge".

In addition to the above sources, Dey described three strategies for categorising:

- a 'bit-by-bit' approach in which the categories are generated through studying the smallest databits of the text and then building concepts of bigger grain size based on interrelating and comparing the smaller concepts or categories;

- a 'holistic' approach in which the researcher predetermines the main themes that he or she wants his categories to grasp and then starts to subcategorise these broad categories later on in the analysis. This approach is more feasible when the researcher is certain about what he or she is looking for in the data at the outset of the analysis; and the

- a 'middle-order' approach in which the categories are developed based on broad preliminary distinctions that may be based on common sense categories. The researcher does not commit him/herself in this strategy to a predefined framework. The analysis can move in either direction, towards more refined distinction through further subcategorising or towards a more integrated approach through integrating the middle-order categories.

At the outset of the categorisation phase, I explored the bit-by-bit approach. This approach suited grounded theory (Dey, 1993, p. 103), an approach that I shifted focus from later on as I ran out of my most valuable resource, time, and faced difficulties in properly designing Nud.Ist index system. As I spent such a long time counting the blades of grass - by following the bit-by-bit approach - I tended to lose sight of what the

field looked like. Similar experiences were reported by other researchers who followed this approach in which they were sceptical about their direction. For example, Singh (1996) reported that she failed to progress in her research project and focus her line of inquiry based on the categories she generated. Instead she depended on her memos that she wrote. The following is a quotation narrating her experience:

> "Though ways of coding are not meant to be prescriptive, the detailed manual approach (Richards & Richards {developers of Nud.Ist}, 1992, p. 42) sets standards that are hard to ignore at the early stages of a study. This attempt at open coding was productive, but it effectively froze coding for weeks as I faced the nearly impossible task of analysing the text in detail when I was unsure of the central themes of the study. I didn't know a better way, but I feared that in this dismembering of the interview, the context and meaning would be lost. Not sure of what I was doing, and only knowing that this detailed questioning of data so early in the analysis, was not working, I continually asked, **Am I doing it right?**".

Dey (1993, p. 104) argues that the selection between the above three strategies of categorising could be a question of pragmatism rather than principle. When time is tight, he discourages adopting the bit-by-bit approach as it is the most time demanding one, "with the result that some parts of the data are never properly analysed.". The 'holistic' and the 'middle-order' approaches may provide a better option to cope with the time constraint.
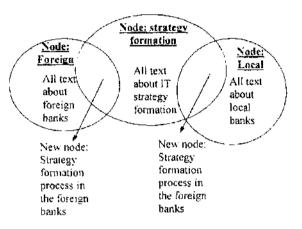
I opted to categorise my data based on broad categories that I derived either from my questions or I envisaged as I became more familiar with the transcript at hand. These categories, or nodes, did not, however, restrict me in my analysis as I deleted some of them and collapsed others. More about these categories will be discussed later on.

Abandoning Nud.Ist:

As mentioned earlier, Dey (1993) prescribed 'description' as a key element in the qualitative data analysis. The 'description' may encompass the contexts, the intentions, and the processes of the phenomenon under investigation. Gable (1994) and Walsham (1995) write that providing this kind of 'thick description' is essential for enabling an understanding of the phenomenon. Stake (1995, p. 40) argues that qualitative research

uses narration to maximise the opportunity for the reader to gain an understanding of the case study. I took the decision, therefore, to present my 'thick description' in a case study format. In order to enable cross case analysis later on, I aimed to structure these cases more or less in a similar way through adopting 'grand' categories embracing the topics that I wanted to analyse. These 'grand' categories formed the bases for reporting my case studies in more or less comparable manner.

The Nud.Ist index that I designed based on the categories or nodes I created violated a key principle that the developers of Nud.Ist prescribed. Richards and Richards (1995, p.89) require that for creating a Nud.Ist index, "one topic or idea should occur in only one place in the

Figure 3: Collating operations to produce new nodes

index system". This type of violation disabled further use of Nud.Ist without substantial amounts of time being spent to modify the Nud.Ist index. What follows is an elaboration of this subject.

Richards and Richards (1995) defined two types of categories or 'nodes', the 'factual categories' and the 'referential categories'. The factual categories may embrace, for example, all text relevant to the foreign banks (by creating a node for all foreign banks) versus all text related to the local banks (another node created for the Local banks). Referential nodes or categories, on the other hand, would include, for example, all text related to issues such as 'perceived role of IT' (by creating a node for this category) or 'process of strategy formation' (by creating another node for this category) regardless of who said it. In this design one can proceed to examine, for example, how the foreign banks differ in their strategy formation from the local banks through using the 'union'

79

command in Nud.Ist (see Figure 3). The outcome of a 'union' search operation could be the production of a new node that contains texts related to the local banks' IT strategies verses another new node that contains the text related to the foreign banks' IT strategy formation process. These two new nodes could be studied for further analysis and thereafter entered into the Nud.Ist system to enable further searches and analysis.

My index system was designed in a way that each of the factual categories, for example each of the banks in this case, had separate node. Moreover, the referential categories, e.g. perceived role of IT, formation of IT strategies, and culture, to mention three, were not located each under a separate node, but instead they were duplicated for each bank, e.g. L1 would have children nodes such as 'perceived role of IT' and 'IT strategy formation', as would all of the other banks. This was a serious violation of the Richards and Richards principle on which Nud.Ist was based. By following the way I designed the Nud.Ist index, I aimed then to use Nud.Ist to help me manage my data so that for each case study I would have more or less similar categories embracing the databits or the snapshot related to these categories, so that I could easily write the 'thick' description forming these case studies. Meeting this goal, however, disabled me at a later stage from analysing my qualitative data based on the 'hierarchical category analysis' that Nud.Ist was designed to support. This was the blind alley that I went down which brought my partnership with Nud.Ist to its end as I did not have enough time then to redesign the Nud.Ist index based on its designers' principles.

There were many advantages I gained from using Nud.Ist, however. As I mentioned earlier, Nud.Ist enabled management of the messy qualitative data by enabling me to group them in categories. It also facilitated laying out the structure of the case studies. The most important advantage, which any researcher would appreciate, was enabling me to comprehend the massive amount of data that were generated from the interviews. In addition to the above, the experience that I gained was valuable in giving me the needed expertise for embarking on Nud.Ist in my future qualitative research projects.

Description of the categories:

I include in this section the main categories that formed the 'thick description' provided in the case studies. These categories were not predetermined at the outset of the analysis phase. However as the blurred vision got sharper they became more identifiable. The following table summarises my broad categories:

Table 3: **Categories and their broad preliminary definition**	
Business focus	The informants' perception of the factors that affect their competitiveness and the banking industry environment in Bahrain.
Perceived role of IT	How the informants perceived the role of IT to their banks. Moreover, it includes the replies of how the banks were different or alike in using IT.
Main IT developments	The main IT systems that the informants talked about.
Reason for embarking on IT projects / driver for the strategy	The reason for embarking on IT initiatives or strategies.
Formation of IT strategies	Responses of the informants describing the process of strategy formation.
Relationship with the vendors	The informants' perception of their relationship with the vendors.
Role of IT manager in the process of strategy formation	The IT managers' role in the process of strategy formation.
Relationship between business strategies and IT strategies	The possible relationship between the two strategies.
Banks' culture	What I perceived as the elements that could draw a picture of the banks' cultures.
Problems associated with the adoption of IT	Replies related to the informants' concerns and problems associated with their adoption of IT.

Dey (1993, p. 102) recommended defining and redefining these categories as the analysis evolves. The above categories provided me with broad guidelines for writing and analysing my cases. However, they were not restrictive. I had to collapse some of these categories as there was redundancy in the topics that they embraced, or it was more appropriate to keep them under broader categories. For example, I collapsed the 'perceived role of IT category' into the culture category, aiming to identify the main features of the different cultures, and I included the 'role of IT manager' and the 'relationship between business strategies and IT strategies' under the 'strategy formation' category. This type of category collapsing, called 'laddering', takes place as part of refocussing the analysis process (Esterby-Smith, 1991, p. 111).

Production of matrices:

> ".. no matter how well you understand things at the case level, you are faced with the spectre of overload and unmanageability when you try to draw meaningful cross-case conclusions.." (Miles and Huberman, 1994, p. 177)

The above quotation describes the difficulties that I faced when I wanted to analyse the multiple case studies. To overcome this problem, I tended to form matrices for the grand categories I developed. As mentioned earlier, data display was one of the qualitative data analysis phases that Huberman and Miles (1994) described. The matrices that I developed aimed, therefore, to assemble the data related to each of the case studies in a standard format to enable my cross case analysis (examples of these matrices are provided in the appendix).

Thick description and the main themes:

As I mentioned earlier, the collective case study approach that I followed aimed to explore the polar extremes of the phenomenon under investigation (refer to page 68). I provide a 'thick description' of these case studies in Chapters five, six, and seven, which discuss the foreign banks, the ad hoc local banks, and the rational local banks

respectively, aiming to preserve the integrity of the story, and provide an insight of the contexts of each case study. The categories that I created with the aid of Nud.Ist helped as a scaffolding for structuring each of these case studies. Moreover, some of these categories acted as the main themes around which I wrote my thematic chapters (8, 9, 10, and 11) where I contrasted the different cases with each other.

Triangulation:

Stake (1994, p. 241) describes triangulating as the process in which the researcher uses multiple procedures including 'redundancy of data gathering' to reduce the chances of any misinterpretation. Miles and Huberman (1994, p. 266) describe triangulating as the process of using different measures to confirm the findings.

My strategy for triangulating depended on using a multiple case study approach, interviewing different informants within each site, and attempting to examine other related sources such as the banks' strategic documents and consultants' reports. This approach, according to Stake may serve to "clarify meaning by identifying different ways the phenomenon is being seen" (p. 241). My success in triangulating depended also on how cooperative the organisations were. In two banks, I was not able to interview more than one informer. Moreover, I faced limited success in getting access to the banks' strategic documents. In the majority of the banks, however, I succeeded in interviewing several informants, which made this technique and the multiple case study approach the main techniques I used in triangulating.

Limitations:

Formal analysis took place after I had returned from my field work. This could be counted as one of the limitations, as I was limited in my ability to exploit the emergent nature of qualitative research that widens or narrows its focus based on the iterative process between data collection and data analysis.

One of the 'nightmares' about data analysis is that the data at hand are not able to illuminate what they are supposed to (Miles and Huberman 1994, p. 77). The probability of facing this problem may increase as the culture becomes more conservative about airing information related to its members' practices. Based on my experience, I found the banking sector to be very conservative in its openness. Some of the interviewees (three informants out of the thirty two informants) refused to be tape recorded, and some interviewees informed me that they were uncomfortable about being tape recorded and were conservative in their answers to my questions. This type of problem may face those researchers who play an outside role, such as I played.

Despite these problems. I argue that the qualitative methodology that I adopted was most suited to answering the type of research questions I posed at the beginning of this chapter. I managed to overcome many of the above limitations through asking my sponsor, Bahrain University, to write directly to the head of the banks and hence gain the needed support from the top management for interviewing the informants. Moreover, interpersonal relationships were an important facilitator for gaining access to the majority of these banks including the regulatory body. In many of these banks. I knew personally (or others recommended me to) the informants and hence trust, which is a valuable resource for the researcher, existed between them and me. In these interviews, the informants were very open and willing to share their views and experiences. These interviews were the most valuable ones for my research project.

Chapter four

Bahrain Financial Services Sector

Introduction:

This chapter discusses the features of the financial services sector in Bahrain. Its aim is to provide the reader with a background to the scene in which the case studies - the commercial banks - operate.

The chapter starts by providing a brief historical background about the Bahraini economy. Then it sheds some light on the main changes that have occurred within the Gulf economies and their effect on the banking sectors in these countries. These changes had affected to some degree the banking industry in Bahrain and were behind some of the changes that occurred within the Bahraini banks that I will discuss in the culture section. The chapter concludes by describing the Bahraini monetary system.

Economy:

The state of Bahrain is located half way down the Arabian Gulf, around 24 kilometres from the eastern cost of Saudi Arabia. Bahrain consists of an archipelago of about 33 small islands, with a total area of 705.55 square km. Bahrain Island is the largest of these and it counts about 85% of the total area of the State of Bahrain. The population of Bahrain in 1993 was around 538,085 inhabitants (Statistical Abstract. 1995).

Bahrain gained its independence on the 14 August 1971 after it had been legally described as a 'protected state' by the United Kingdom. On the 21 September 1971 it joined the United Nations (Bseisu, 1984).

Before 1930, Bahrain had been dependent on trade and pearl fishing industries as the main sources of revenue for the country. However, the introduction of the Japanese cultured pearl resulted in the collapse of the pearl industry, an event that created a severe recession in the Gulf region at the time.

1932 marked a turning point in the modern history of Bahrain. In that year, oil was discovered in commercial quantities, which transformed the economy and the social life of the country.

The economy of Bahrain between 1930 and late sixties may best be described as a one commodity economy which depended on oil as the main source of income to the country. However, the production of oil from the main land decreased starting from the early seventies[1], providing only a modest revenue to the country as compared to that of the other Gulf states. Currently, the Bahrain oil industry is concentrated in exporting refined products rather than crude petroleum (Capital intelligence, 1994). The refinery of Bahrain processes imported oil from Saudi Arabia in addition to the Bahraini crude oil. In 1994 Bahrain processed a total of 88.787 mn barrels, out of which 75,716 mn barrels were imported from Saudi and 14.650 mn barrels were Bahraini crude (Statistical Abstract, 1995).

The economy from the early seventies onwards may best be described as diversified. The government of Bahrain followed a diversification strategy to overcome the declining oil revenue. The Bahrain aluminium plant was the earliest industrial project marking the new era. The aluminium smelter marketed 446.200 tons of aluminium in 1993. Surrounding this project, there were a number of ancillary projects and services that depended on the production of the aluminium smelter. These were Bahrain

---

[1] Crude oil production decreased from 27.973 mn US barrels in 1970 to 14.650 mn barrels in 1994. (Bseisu, 1984, p. 64 and Statistical Abstract. Dec. 1995)

Aluminium Company which markets the output of the smelter, Bahrain Aluminium Extrusion Company, an extrusion plant; International Bahrain Aluminium Atomiser, a powdering plant; and Middle East Aluminium Cables which produces wire, to name some (BMA, 1994).

The other course of diversification strategy took place towards the services sector. Tourism was one of the services sectors that received attention. However, the major expansion in the services sectors was in insurance and to a greater extent in banking. In the insurance sector, a multi-national insurance company called the Arab Insurance Group with an authorised capital of 3 billion dollars and paid up capital of $150 mn was established in 1981 (Bseisu, 1984). As for the banking sector, by the end of 1992 Bahrain hosted seventeen commercial banks, forty seven offshore banks, forty one representative offices, and twenty one investment banks. In 1994, this sector including real estate contribution was around 20% of the GDP. The commercial banks contributed less than 5% of the GDP (Statistical Abstract, 1995).

Table 1: Percentage contribution to GDP by type of economic activity

Agriculture & Fisheries	0.9
Mining & Quarrying	15.7
Manufacturing	17.6
Electricity & Water	1.7
Construction	6
Trade, Hotels & Restaurants	11.4
Transport and communications.	11.8
Finance & Real State	20.1
Social & Personal services.	5.2
Public Admin.	19.5

Source: Statistic Abstract 1994. Central Statistics Organisation, Bahrain

Economic factors affecting the banking industries in the Gulf states, a historical perspective:

This section discusses some of the key economic changes that happened in the Gulf economies during the 70s to mid 80s which influenced the banking industry in Bahrain.

The Gulf Co-operation Council countries (GCC), Bahrain, Kuwait, Qatar, Oman, the United Arab Emirates, and Saudi Arabia, may share more or less similar characteristics amongst themselves. The economies in these countries are highly affected by changes in the oil revenue that forms a major source of income to these governments.

The sharp increase in oil prices during the late seventies and early eighties positively influenced the government's revenues and subsequently the domestic liquidity in the GCC countries.

The banks had high liquidity, which made it possible for them to meet the growing demand for credit lending. Some of these banks ".. were willing to lend funds on the basis of name rather than balance sheet and, in many cases, they were serving the interests and businesses of their major shareholders (ESCWA, 1987, p. 1)."

The domestic markets were limited in terms of the business opportunities open to the banks. Lending was done mainly to finance commerce, construction, and real estate. Investments in the real estate markets were then recovered in relatively short time. This encouraged speculation in the real estate markets which were booming in most of the GCC countries (ESCWA, 1987, p. 2). Moreover, there was a tendency amongst the banks to participate heavily in international loan syndication to seek new business opportunities.

1985 was a turning year for the economies of the GCC countries. The sharp decrease in oil prices and the depreciation in the dollar triggered a series of negative economic events. The GCC governments restricted their spending polices to meet the sharp decrease in their revenue. This policy contributed to the recession that hit the region in that period. As a consequence of these changes, the structure of the banks' lending shifted away from the real estate and construction sectors to other sectors, such as the industry and services sectors.

The recession hit the real estate and the stock markets then in many of the Gulf states. Many of the participants in these markets were unable to meet their debt obligations. Consequently, the banks' profitability suffered, especially in those banks that had accepted buildings, lands, and stock shares as a collateral (ibid., p. 18). The percentage of non-performing loans to outstanding loans increased drastically. In some countries, like Saudi Arabia and the UAE, the non performing loans were about 45% of outstanding loans (ibid., p. 5).

The world debt crisis also contributed to the profitability problems of the GCC banks. Most of the banks that participated in the Euro-dollar syndicates suffered when countries like the Latin American countries, for example, failed to meet their obligations. For example, Latin American debts were tradable in the secondary markets at around 30-35%. Many of the Gulf loans were barely recoverable at all (Cunningham, 1989).
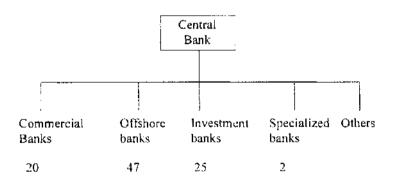
As for the 1990s, many of the banks, including the Bahraini banks recovered and produced profits, though the second Gulf crisis in 1990 left some scars on the performance of some of these banks.

The above changes may provide some explanation for the changes that occurred within the Bahraini market which had influenced the banks' strategy formation and thereafter IT adoption behaviour, as will be discussed in more detail in the coming chapters.

The financial services sector in Bahrain:

Structure of the financial market:

The financial sector in Bahrain, as Figure 1 indicates, is made up mainly of commercial banks, offshore banks, investment banks, specialised banks, and other financial institutions such as brokers, money changers, investment advisory and representative offices. All areas of the Bahrain banking scene are regulated by the Bahrain Monetary Agency (BMA), which plays the role of the central bank. The BMA maintains a close relationship with the Bank of England (Cunningham, 1989) from which has advisors. The BMA was the first bank amongst the Gulf states that adopted the Bank of England's "loss provision matrix" that requires specific resources to be set against the loans (Cunningham, p. 9). The banking institutions supervised by the BMA receive one of three types of license. These are full commercial bank (FCB), offshore banking unit (OBU) and investment bank (IB) licenses. Figure 1 summarises the number of these banking institutions in 1994.

```
                        ┌──────────┐
                        │ Central  │
                        │  Bank    │
                        └────┬─────┘
                             │
    ┌──────────┬──────────┬──┴───────┬──────────┐
    │          │          │          │          │

Commercial  Offshore   Investment  Specialized  Others
Banks       banks      banks       banks

20          47         25          2
```

Source: Statistical Abstract 1995.
State of Bahrain, Central Statistics
Organization.

Figure 1: Financial institutions operating in Bahrain (1994).

Investment and specialised banks:

In 1994, there were 25 investment banks. These banks are allowed to perform merchant banking business, especially securities business. These institutions provide limited banking activities such as accepting deposits from banks or non-banking institutions outside Bahrain provided that these deposits exceed certain limits. These banks are not allowed to issue any checking accounts or check books.

The specialised banks, on the other hand, are represented by the Housing Bank and the Bahrain Development Bank. The Housing Bank is fully owned by the government and its aim is to advance housing related loans. The Development Bank, on the other hand, aims at supporting industrial and business activities in Bahrain. It is owned by the government, other banks and the private sector.

The offshore banking units (OBUs):

As mentioned earlier, the decline in the oil revenue obligated Bahrain to diversify its economy. The services sector came under consideration as a possible source of revenue then. In 1975, BMA announced that it would develop Bahrain as an international banking centre. Thereafter, Bahrain was successful in attracting a relatively large number of offshore banking units.

The OBUs are banks or branches of foreign banks that are licensed by the BMA to carry out banking operations outside Bahrain. These offshore units are not allowed to deal with the residents of Bahrain other than the government or the fully licensed banks. (Bseisu, 1984).

The surplus of liquidity that was caused by the high oil revenues during the early seventies created a demand in the region for regional financial institutions sophisticated enough to absorb these surpluses rather than allowing them to be deposited abroad. The proximity of Bahrain to Saudi Arabia, a main source of these surpluses and main borrower (Cunningham, 1989), and the disappearance of Lebanon as a regional financial

centre due to its civil war, enhanced Bahrain's ability to establish this regional centre (Bseisu, 1984).

The total assets of the OBUs has fluctuated over the years depending on the economic prosperity in the region. It fell from over US$72 billion in 1989 to US$51 billion in 1991 and then it rose to US$70 billion in 1992 (Capital Intelligence, 1994). Their contribution to the Bahraini GDP in 1994 was 8.1% (Statistical Abstract, 1995).

The major portion of the assets and liabilities of the OBUs was within the Arab world. However, the Gulf crisis in 1990 increased the importance of the USA in this distribution, as the following table indicates (Capital intelligence, 1994).

Table 2. Distribution of assets and liabilities of OBUs

	1983		1988		1993	
	Ass	Liab	Ass	Liab	Ass	Liab
Arab Countries	46.8	65.5	40.7	62	34.6	48.3
North America	3.6	4.3	7.1	6.8	19	16.4
Western Europe	24.9	20.5	20.8	16.7	22.1	19.8
Offshore Centers	9.6	7.4	7.4	8.4	7.7	8.6
Other	15.1	2.3	2.3	6.1	16.6	6.9

Source: Capital Intelligence, Jan. 1994. P.O. Box 3585, 6-8 Paphos Road, Limassol, Cyprus

Commercial banks:

My thesis focuses on studying the commercial banks in Bahrain. Some of these banks carried two licenses, full commercial bank and OBU licenses, which enabled them to perform domestically and abroad. The commercial banks' markets are protected and regulated by the central bank. Each of the licensed financial institutions is restricted to offering only what its license permits it to offer. Moreover, none of these institutions can compete in the other's market. e.g. the offshore banks cannot compete domestically with the commercial banks and no non-commercial banking institutions can offer banking products and services other than the commercial banks.

Bahrain was the first country amongst the Gulf states to have a banking industry. The first bank operated in Bahrain in 1921, followed by another bank that operated in 1944. Both of these banks were branches of foreign banks. The first national bank was

established in 1956[2] (Arab Communications, 1993). These banks were operating domestically at the time and were providing rudimentary services such as:

> "Opening of current accounts, savings accounts and time deposits for individuals and corporations.
>
> Lending to businessmen and traders: by means of overdraft, loan agreements and the discounting of promissory notes or post-dated cheques.
>
> Financing imports and re-exports, through letters of credit or bills collection sent to importers in Bahrain.
>
> Effecting remittances abroad for residents of the island either for trade or personal purposes."
> (Bseisu, 1984, p12)

During the seventies, the growth of the commercial banks' activities in terms of assets followed the pattern of the economy and was highly influenced by the revenue of oil (Ibid., p. 13).

In 1994, there were 19 commercial banks, out of which two banks were operating based on the 'Islamic' financing principles. The majority of the commercial banks were foreign banks. However, there were six banks which were either fully Bahraini banks or joint venture banks with Bahraini capital. Around 12 of the foreign banks were branches of foreign banks. The total assets of all of the commercial banks grew from 1,228.0 million Bahraini dinar (BD) in 1983 to BD2,618.9 mn in 1994 (Statistical Abstract, 1995).

In 1992, there were seven banks that controlled around 82.6% of the domestic operations (Capital Intelligence, 1994). The following is a break down of the banks' market share:

---

[2] Bahrain business Directory, 12th Edition 1993, Published by Arab Communications

Table 3: Commercial banks' market share-Bahrain operations only (1992)	Assets BDmn	%
Local Banks	1399.4	70.1
Two main foreign banks	249.1	12.5
Others	347.3	17.4
Total	1995.8	100

Recalculated based on Capital Intelligence figures.

Banks' lending structure:

One of the concerns about the Bahraini economy is that it is small as compared to that of the other Gulf states, especially Saudi Arabia and the UAE (see Figure 2). The domestic market was described as being overbanked with too many Bahraini dinars chasing too few business opportunities, to paraphrase one of the banks' informants.
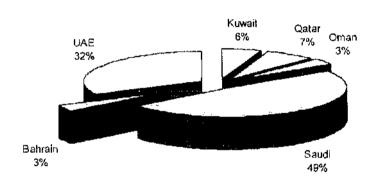
Figure 2: GCC Countries Commercial Banks Credit
Source: Economic Bulletin, 1995, Gulf Co-operation Council

Table 4 represents a summary of the lending structure of the Bahraini banks to the different sectors. During the seventies, all of the banks perceived personal financing as a marginal business and most competed in financing the construction and trade sectors. However, the changes within the Bahraini economy shifted the focus to the personal sector, starting from the early eighties. Personal lending increased from 10.6% in 1978 to 33% in 1993 making it the leading sector in terms of banking lending structure. The informants within the banks that I interviewed claimed that the competition was very stiff in this area as these banks tended to copy each other's products. The manufacturing

94

sector was next in importance to the personal sector as there was a greater tendency from the government to seek private sector support for its development projects. Trade financing was the traditional financing sector which was most linked to the market conditions in Bahrain. It was ranked the third most important sector in 1993.

Table 4: Lending Structure of Bahraini Banks
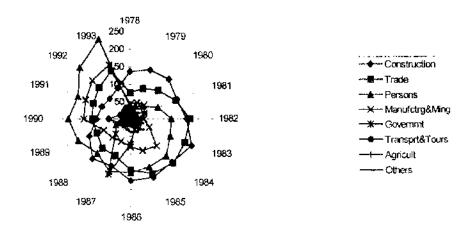
	Construction	Trade	Persons	Manufctrg&Ming	Govermmt	Transprt&Tours	Agricult	Others
1978	136.27	77.5	36.33	44.46	15.96	18.95	1.59	10.34
1979	153.11	96.21	41.1	51.83	19.37	16.48	1.72	15.38
1980	162.69	118.02	51.35	57.58	19.26	19.12	0.77	25.36
1981	149.09	145.35	89.32	44.51	7.87	13.84	0.93	44.4
1982	166.22	175.86	121.3	38.86	23.92	12.83	1.18	28.38
1983	196.93	173.83	128.22	61.1	25	12.19	1.06	32.2
1984	173.07	177.92	150.39	109.61	30.73	20.9	1.9	43.13
1985	180.28	168.6	147.33	96.44	34.4	11.25	0.58	39.13
1986	175.76	145.52	153.04	80.62	73.61	10.63	1.06	38.7
1987	145.59	113.81	161.94	70.11	169.66	17.65	1.23	33.3
1988	160.41	118.07	139.03	75.68	61.28	24.02	1.2	26.88
1989	131.23	107.08	166.78	85.63	45.73	32.17	5.5	25.9
1990	100.02	112.49	183.25	137.214	12.28	64.34	0.72	28.95
1991	91.63	118.5	167.64	143.3	14.7	30.7	1.7	28.46
1992	85.279	129.89	210.176	158.7	17.8	15.7	0.38	36.15
1993	97.035	149.37	246.299	167.8	30.8	11.9	0.88	42.28

Structure of Banks' credit in Bahrain (mn BD)

Sources:

Sharoqi, Mohamed, 1993, The Development of Bahrain Economy: 1971-89
  (in Arabic), BMA publications
Economic Bulletin, Economic Research of the GCC Countries. VII. 1992
Quarterly Statistical Bulletin, BMA, Sept. 1993

Structure of Banks' credit

Commercial banks' profitability:

The commercial banks' profitability suffered as a result of the non-performing loans that they incurred. These banks had made substantial provisions for the bad debts that they incurred in that period, a factor that negatively influenced their profitability.

The above changes within the economy and within the banks' profitability had had a major influence on the banks. In the culture section, I discussed the radical changes that had taken place within a number of the banks. These radical changes were influenced by the economic changes that I have discussed above.

Islamic Banking:

In addition to the traditional banks, Bahrain is focusing on becoming the financial centre for the Islamic banking institutions. In 1993, there were 18 Islamic financial institutions operating in Bahrain. Other conventional banks, e.g. Citibank, opened what they referred to as 'Islamic Windows' to serve this niche of the banking market. These dealt in diversified activities including commercial banking, fund management, insurance, and offshore banking (BMA, 1994).

The Islamic banking system operates on the bases of profit sharing, mark-up sales and equity participation. The general guidelines for these institutions is that money is only a store of value and means of exchange. It has no interest value in itself and therefore it should not earn money by being idly deposited in the bank (ESCWA, p. 27). Profit in these institutions is therefore derived from direct investment in productive ventures or from provision of tangible services rather than monetary investments that attract interest (BMA, 1994).

Chapter Five

Foreign bank case studies

Introduction:

This chapter introduces six case studies on the foreign banks. These cases are grouped together based on their similarities. The total assets to these foreign bank groups are provided below. For reasons of confidentiality, I did not include these statistics in the individual case reports.

	Total assets of the foreign banks in 1994
Largest group	US$ 290,801,590,503
Second largest group	US$ 139,456,859,438
Third largest group	US$ 74,883,001,554
Fourth largest group	US$ 53,534,658,113
Fifth largest group	US$ 11,785,993,749
Smallest foreign bank	US$ 1,542,480,000

Foreign Bank One (F1)

Introduction:

Foreign Bank One (F 1) is an international bank, which is established in around sixty countries. The bank has operated in Bahrain since the mid-seventies with a very small number of branches and a total of 70 employees. The bank's branch in Bahrain is directed by its regional office, which is responsible for five other countries in the Gulf region, Pakistan, and Africa.

This case summary is based on interviews with the regional Information Manager (IM), who is responsible for the IT scene within its branches in the region.

Business focus:

> "Corporate banking is highly strategic in Bahrain and in the network. We provide all sort of finance for our corporate customers. The 'know-how' of the business advice.. if you want to open a business in other countries we provide expertise.. if they want to establish some sort of a business we are able to advise them since our branches are in almost every country. In this sense it is difficult for a local bank to compete with us. So we are more towards the multinational companies or the big corporate or trading business." The information manager.

The above quotation summarises the bank's business focus in Bahrain and in the international markets. The bank capitalised on its extensive international network in serving its internationally operating corporate clients. The informant believed that the local Bahraini banks have had a competitive disadvantage with regard to serving international corporate business as they lacked the necessary international network. The cost of dealing with the same bank internationally may have been more attractive to

international clients than dealing with several smaller banks that were not as well connected, as is the case with local banks. The bank's strategy aimed at building a close relationship with the international corporate clients to provide them with consultancy services within the markets in which they operate. To support this kind of relationship, the bank built its services around providing its clients with access to a variety of strategic information, as well as enhancing its response to its clients' needs.

Although in general corporate business was more strategic to the bank than its retail business, in some major international markets such as the USA, Hong Kong and the bank's home country, the bank's main business was retail banking. Within Bahrain, the bank focused on serving the corporate niche, although retail business was part of its daily activities.

Main IT developments:

As Figure 1 indicates, during the seventies, the bank operated on the basis of batch processing systems. In the eighties they transferred to an on-line processing system, and in the nineties the emphasis has been on providing delivery systems linking the international clients to the bank's system. Connectivity progressed
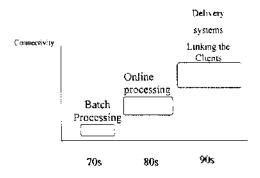
Figure 1: Main IT developments in F1

accordingly from an isolated island of systems and databases, to internally interlinked systems, and finally to global bank-client interlinked systems.

The bank was in the early stages of implementing "client server technology" and downsizing its IT environment. The informant perceived this approach as following the trend in the international market in which a bank diverged, either downsizing its IT infrastructure or continuing with the mainframe environment. Each of these IT infrastructure strategies may require large investments. The down-sized client-server IT environment may provide users with more flexibility in terms of applications that they may run at their workstations, in addition to costing less in terms of technology than the mainframe option. Nonetheless, migrating from a mainframe to a down-sized environment would require the investments of large sums. Continuing with the mainframe environment would also be an expensive option due to the high cost of the mainframes. The informant said that they were studying each option, and they had not yet determined whether to downsize their IT infrastructure on a large scale basis. It is worthy to mention that in Bahrain, the retail banking system was installed on a client server technology.

The following are the systems that the informant mentioned while talking about the bank's main IT developments:

- ATMs;

- Phone banking systems (yet to be introduced after implementing and testing elsewhere);

Both of the above systems were directed at the retail banking business.

- Remote Letter of Credit generating systems;

- Electronic banking;

- International Cash Management System;

The above three systems were mainly developed to meet the needs of international corporate clients.

Role of IT and business strategy:

In another two months we will have a system settled in the branch from early next year. We will introduce telephone banking. That is for the retail customers. For the corporate, the telephone banking hardly works... we will introduce.. electronic banking.. it is tested in Singapore. PC to PC communication, the corporate customers can enter their request on a PC to inquire about their balances, interest rates, exchange rates and can send a transaction for money transfer. They can capture all of this on PCs... For the Multinational companies, we enhanced what we call a Cash Management for them that the customer can link to our computer and make inquiry from any branch that deals with [Foreign Bank One] world wide.

.. in our priority, it would be the electronic banking more important than the telephone banking.

For the corporate banking, IT is a tool to help, but more important is how the corporate customer and the bank build up their relationship. That very often takes time. Both are going together. The bank may grow with the customer. The relationship is more important than the bank with the retail customer. For the corporate very often their business is our business because the bank has high exposure, so for this kind of relationship, IT is only a tool or some kind of facility to help. but more important is the mutual benefit and mutual trust... In our advertisements we emphasise on the way in which we will be able to help the customer, IT is important, but it is not highly strategically important. It is some sort of facility.

...some international branches here like Philips, like British Airways, like KLM, they require the financial information of their branches here to consolidate.. our system are more driven to the need of their corporate level..

The above quotations illustrate the role that IT plays and its connection to the business strategy of F1.

The bank was not focusing on retail business. As for Bahrain, the bank was restricted in the number of branches it could open. Accordingly, retail business was not perceived as strategic to the bank, since it would require an extensive branch network to enable the

bank to compete with the local Bahraini banks, which had a competitive advantage over FI in that respect. There was not a large enough volume of retail business to encourage the bank to invest in some IT systems, such as credit cards, in Bahrain. To quote the informant:

> ".. business volume.. we have always to find a balance between cost and profit. for a foreign bank here with one branch, it is very difficult to find a balance.."

Retail banking was not perceived as a strategic business for the bank, nor was the retail delivery system, such as phone banking. Nonetheless, the bank had to introduce it because norms dictated it To quote the informant talking about the retail banking business:

> ".. for most of the bank's branches, they are more corporate or investment banking oriented. the retail may not be important, but we need to provide this kind of services.."

Since corporate business was perceived as being strategic to the bank's network, the IT supporting this business was also perceived as more strategic than that supporting the retail business, as quoted earlier.

There was a threshold level of services that the bank perceived as being crucial in order to support their business. Beyond these "basic needs" the bank perceived IT as less important in generating business, and was thus conservative in its spending on IT. To quote the informant:

To our close competitors, I would say that our IT is not better than theirs. We are able to meet the basic needs...

..to bring yourself up to the state of art of technology is very expensive..

..we don't want to be the market leaders of technology because you are talking about much higher cost..."

IT Strategy Formulation:

Centralised top-down approach:

The formulation of IT strategy within the bank was centralised from the headquarters level and then filtered down to the branches (see Figure 2.)

Figure 2: IT strategy formation within F1

At the headquarters level, there was an "IT council" that consisted of two members from the managing board and three senior executive vice presidents (SVPs) (see Figure 3). The IT council's main objective was to determine the bank's overall IT strategy, its priorities, and its budget. Below the IT council, there was an IT steering committee that consisted of senior executives. Their main responsibilities were to set up detailed IT strategies and policies and to follow up the execution of these strategies. Under this committee came the Application Systems Implementation (ASI) department, which was responsible for the implementation and development of the systems. Also under the IT steering committee came the Information Management (IM) department, which worked in co-ordination with the ASI department.

It was responsible for defining the users' requirements and the user acceptance tests and for distributing the developed systems to the branches throughout the regional IM offices. For every six to eight countries there was a regional IM office.

Bottom-Up: IT strategy maintenance:

Adapting the main IT strategy to the unique requirements of each branch was a bottom up approach, as Figure 2 indicates.

The regional IM offices were responsible for delivering the branches' IT needs. The user needs filtered up from the branches to the headquarters via the regional IM offices. Decisions on whether to meet these requirements were centralised at either the regional office or the headquarters.

Depending upon how important the required IT system was, the development of IT systems took place either within the branch (if the system was only important at that branch), at the regional office (if the branches belonging to that region would benefit from the proposed system), or at the head office level (if the system was perceived as being important for the Group's branches world wide).
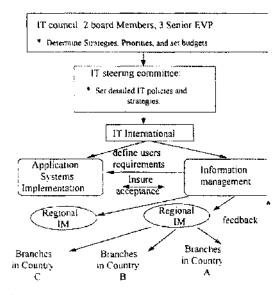
Figure 3: *IT strategy formulation at FI*

It is worth noting that the informant stressed upon this top-down approach as being the main source of the bank's IT strategy world wide. Nonetheless, he also mentioned that

there was a bottom-up influence from the branches to shape the grand strategies. These initiatives represented the branches' struggle for more resources.

Economies of scale:

At the head office level, the objective for developing systems was to achieve economies of scale and to reduce development and maintenance costs. Accordingly, the bank encouraged international solutions and centralised all development decisions made at the regional offices which co-ordinated with the headquarters. This policy required the standardisation of the systems around a common platform, which dictated the creation of relationships with main vendors to enable the implementation of the bank's IT strategies world wide.

Develop for high potential markets then universalise:

As a policy, some systems were developed for some markets that have high business potential and then universalised to other markets at a lower marginal cost. The telephone banking system was an example of this. The bank was in the process of implementing and testing it in countries other than Bahrain. Once it had been successfully introduced elsewhere, the system would be introduced in Bahrain at a minimal cost. It is worth noting that other local as well as international banks had preceded Foreign 1 in introducing their own phone banking system.

Slow Responsiveness:

Opting for international solutions slowed down the bank's responsiveness to changes within the markets, especially the local needs of the branches, as the informant explains:

"...it was serious, some time also it takes a very long time. Sometimes I have to make my own decisions and say OK lets do it. It may take one or two years... they always look for international solutions and it takes a long time... from time to time I have to make my own decisions and take the risk. The head office may return to me and say 'Hey! What are you doing?!!"

Follower in the market, not a leader:

The informant believed that the bank was at a competitive disadvantage when compared to its main competitors, which included not only banks, but other financial institutions as well. The informant believed that leading the market in terms of technology would dictate a higher cost for the bank, something the bank was reluctant to bear To quote the informant:

> "..compared to our close competitors, our IT is not up to their level. Our competitors are not only banks but also other financial companies because we are doing investment banking. We don't want to be the market leaders because you are talking about much higher cost.."

> "...at the moment we are very far behind them, but next year we will catch up by providing electronic banking. We will be in line with the Hexagon services.."

The bank's IT strategic thrust was, therefore, to defend rather than to lead the market. For example, the bank's electronic banking system - "International Cash Management System" - was designed in response to a similar system introduced by another international bank perceived as a technology leader by Foreign 1.

As for the local Bahraini market, Foreign 1 was not a leader in implementing its ATMs nor the phone banking systems. However, it was amongst the first wave of banks to introduce electronic banking.

Development of application systems:

The bank's application systems were developed through three channels. The most important one was the bank's own IT expertise. This process was perceived as being

costly, risky and taking long time to implement due to the scale of the projects. To speed up the process, the bank depended to a lesser extent on outsourcing. However, this approach held a disadvantage. By outsourcing, the bank might have missed an opportunity to develop internal expertise in implementing and maintaining the systems on a world-wide scale. In addition, the bank depended to a lesser extent on "off the self" packages to meet its application requirements.

Role of the IM manager:

There was no formal IT department within the bank in Bahrain due to its small size. The determination of the IT requirements for the branch in Bahrain was the responsibility of the regional Information Manager who was not a permanent resident in Bahrain, but only occasionally visited the branch in Bahrain to look after its IT needs.

Relationship with the vendor:

The bank maintained a close and long-term relationship with IBM. Its systems were standardised and upgraded within the IBM platforms, and it had progressed from IBM system 34 to system 36 and finally to the AS 400 series over the last two decades.

The bank's relationship with IBM was maintained at the headquarters level, since this was where its IT strategy was formulated. All branches were requested to adopt IBM systems.

Drivers of IT strategy:

Matching the competition- a defensive measure:

"We are different than other banks like Citibank, they are market leaders. If we are not the market leaders, we need to be the market followers otherwise we will lose our business.. so what other banks do is very crucial...

"We are not leaders in term of technology, we are followers. Our IT is more business driven or [competitor driven]. ATM, electronic banking.. since the other banks already have so we better have or it is very difficult to convince the customers to come to you..

The above quotation summarises the main drivers of the bank's IT strategies. IT was adopted as a competitive necessity. Since the others had it, this bank also had to offer it, otherwise it would lose its competitive stance in the market.

The international cash management system (ICM):

Foreign 1 was in the process of designing a system that would enable its international clients to manage their cash positions. The project was a step beyond the electronic banking system that linked the local clients with the local branches. With the ICM, the international clients would be able to link internationally instead of just locally. To quote a senior informant who participated in developing ICM:

".. electronic banking was just providing local customers with an interface to the local branch. For the top of the market, i.e. companies which are truly global in their scope of activities, it's no longer enough...".

Driver of ICM:

As for the driver in developing the ICM system, another senior vice president[1] who participated in the development of ICM said:

---

[1] Cited in an internal publication about ICM.

"..from a defensive point of view you have to provide these services or you will lose the market. However, there is also a positive objective. The whole purpose of the project is to increase the volume of the payments. In a way it is funny that payments have not been regarded as core business. Treasury, loans, issues, that was banking. But run of the mill business is just as important. In the first place, payments tie you to the customer. Secondly, once you realise a certain volume, it can become quite profitable..."

In the above quotation, defending the bank's position was the first driver that the informant mentioned. Other drivers were linked to the bank's business objectives. These included creating a more intimate link with the international clients: ".. where clients lead, a bank better follow.." , and creating business opportunities from the payments, ".. once you realise a certain volume, it can become quite profitable."

Supporting the bank's business strategies:

...some international branches here like Philips, like British Airways, like KLM, they require the financial information of their branches here to consolidate.. our systems are more driven to the need of their corporate level..

As mentioned earlier, the bank's business was focusing on serving a specific niche in the market, that of international corporate clients. Systems such as the ICM supported the bank's business focus. As indicated in Figure 1, the bank's IT systems allowed the bank to interlink with its international clients and, hence, supported their business strategy.

Pressure from the international clients rather than local clients:

Q. Was there any pressure from institutions either within Bahrain or outside Bahrain to adopt certain IT systems?

Informant: it is more at the corporate and network level. Pressure from Bahrain is not so much. because the market here is not so sophisticated as that in London, New York. the customer is less demanding and less sophisticated than the other multinational..

The big local firms like Al Ziani, Al Moyeed, etc.. are more local chain oriented than multinational oriented... ...some international branches here like Philips, like British Airways. Like KLM, they require the financial information of their branches here to consolidate.. our

system are more driven to the need of their corporate level..

The above quotation demonstrates that the bank's IT strategies were influenced more by the needs of the international than the local clients.

Improving efficiency and service quality:

The other drivers for the bank's IT strategy were related to improving the bank's internal efficiency and providing better services for the customers. Security of the bank's systems, speed of processing, and availability of information were among the most important issues the regional IM manager discussed. To quote him:

> ".. internally as we discussed earlier, to have a better control on our activities and to have better information and fast and accurate information. So at the end of the day we are not only improving our efficiency which means that we are saving cost, but also providing much better and faster services to the customer and providing new products for the convenience of the customer...".

IT crucial for the bank's operations:

> ".. IT is everywhere. You are talking about high volume of transaction and a very limited staff... for handling the transactions for handling the general ledger, I can't imagine [did not continue his sentence] ... for the operations, we have to rely on IT... the back office staff are getting less and less, we need humans to contact the customers..."

The above quotation was in response to a question on specifying the IT systems that were strategic or operational in nature to the bank. The IM manager's response indicated that IT has played a major operational role in reducing the bank's dependence on human intervention in the back office operations.

Foreign Bank Two (F 2):

Introduction:

Foreign Bank Two is a regional bank that operates internationally.

I interviewed two informants from F2. The first was the EDP manager, an Arab national who had been in banking for 20 years. He worked with international banks such as First National Bank of Boston before moving to Foreign Bank Two. During his career, he progressed from programmer, to analyst, to senior analyst, and was promoted from within the bank to head the EDP section of the bank's branch in Bahrain. His educational background was in computer science. The second informant was the bank's deputy manager. He was a 40 year old Indian national, with an MBA degree and 18 years of banking experience, 5 of which he had spent in Citibank and the rest with Foreign Bank Two.

Business Focus:

The bank's branch in Bahrain operated in two different markets, the local and the international. In order to operate in the local market, the bank had acquired a Fully Commercial Bank (FCB) license from the Bahrain Monetary Agency, while to operate internationally from Bahrain the bank had acquired an Offshore Banking license.

The deputy manager was responsible for credit management in the international

markets, more specifically, Eastern Europe, India, Pakistan and the Gulf area. Within the Gulf area the bank concentrated on two major markets, first, the Saudi market, followed by the United Arab Emirates (UAE) market.

In Bahrain, the bank was involved in the retail business. Unlike some local banks that encompassed every segment of the retail market, Foreign Bank Two focused on high-worth individuals and businesses.

Factors affecting the competitiveness of the bank:

Within the international markets in which Foreign Bank Two operated, the bank's main competitors were the local banks operating in these markets. The criteria that determined the bank's competitiveness, as perceived by the deputy manager, were as follows:

- ".... quality of service and the ability to respond quickly.." ".. [the] ability to understand the needs of the customers..";

- pricing;

- ".. the ability to follow into the various things.."

- creating a trustworthy image; and

- " ability of the borrower to get a good rate from the bank".

The deputy manager believed that the bank's competitors, especially those in the Saudi market where many of the bank's major clients originated, held a competitive advantage, as they were able to deliver cheaply since they were located within the same geographical area.

Role of IT as Perceived by the Deputy Manager:

IT as a means of operating in other geographical markets:
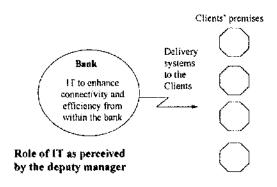
As mentioned earlier, the bank operated internationally. Some of the regional markets. especially the Saudi market, were perceived to be highly strategic for the bank but due to regulatory reasons, F 2 did not have a physical presence in that market.

IT played a vital role in operating beyond the Bahraini market. EDI played an operational role without which the bank would not be able to perform its activities:

> ".. for us it is bread and butter. Without technology, we are out of business. So for an offshore centre, IT is the bread and butter".

The deputy manager mentioned that they were using different media for EDI such as Telex, Router, and Swift. Since all of the banks were using these media similarly for their operational requirements, mainly to achieve speed and security, the bank gained no competitive advantage by using this type of technology.

IT was also perceived as playing a strategic role in enhancing the responsiveness of the bank in Bahrain to its world-wide clients, with special attention paid to the clients in Saudi Arabia. IT was perceived as a means of creating a

Role of IT as perceived by the deputy manager

link with the international clients through enabling them to interlink with the bank's systems, and thus initiate transactions from wherever the clients were. Such an initiative was perceived as being important as it speeded up the bank's response to clients' requests through cutting down the manual processing of transactions. This type of technology was provided only to a limited number of clients due to the cost of the system at the time.

No less important than using IT beyond the boundaries of the bank, the bank in Bahrain also observed a strategic role for using IT within the boundaries of the bank, to reduce the response time to international clients making international calls. To achieve this, the bank embarked on a project which included renovating its PCs, linking them through a LAN on one hand, and on the other, linking them to the bank's mainframe system. The aim was to enable the bank's officials to respond immediately to international clients whenever they called. Advancements made by IBM - who designed its AS 400 system - in opening up and linking to the PC environment enabled the bank to improve this responsiveness:

> ".. focusing on the offshore unit, IT is very vital in all our aspects even in our dealing with our customers.. our customers are offshore. We don't have the ability to meet the customer on a day to day basis, we have to use various means to communicate with him.. he has to access us on line for various things. Most of the time we speak with them on the telephone, but any other form of technology would support this..
>
> .. we don't have physical contacts .. as we get a request from a client outside, we process it and

we send it again. So we are only like a processing centre in the middle and all the ties in and out are all technology related.."

Ephemeral nature of IT:

Despite its crucial role for the bank's business, the deputy manager believed that, due to the ephemeral nature of IT, the bank was not able to gain a sustained competitive advantage over other banks through its use. Nonetheless it gained a competitive parity with the others since it was a follower in the market. Any profitable IT system can be replicated within a short period of time, which can change a comparative advantage to a comparative parity, as he explained in this quote:

".. the technology being used by all banks is more or less the same. If you say, without the technology, can you do business? No, because it becomes an essential feature. From time to time there are differences in IT that makes you more competitive but this is overcome in a short while.. because if that is the feature that makes more profit then every bank will go after it and buy it. You may have 3 months or 6 months advantage, but not longer than that...

like the Visa cards, now everybody can issue a Visa card. It is no longer something sophisticated... Until 1993 we did not have any Visa card issued over here.. but now we caught on.. because customer financing business caught on.."
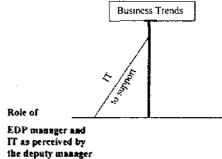
The ephemeral nature of IT was due to the availability of systems the bank could buy or outsource through the vendors, as quoted below. As for F 2, it made strategic links with its vendors to keep the bank in line with the pace of change in IT. More about the strategic relationship with the vendors will be discussed later on. ".. I think there are values in sharing products or services because as I said earlier. nothing will be unique about this business six months from where it is. If it is a business that I want to do, I can get in to it within six months and even less. In some of these things the product that you can sell is fast to replicate.

.. if we want to go after a particular business and IT is a requirement, you can always subcontract the IT business..

we have a good link up with Microsoft and with IBM... I think that in due course we will be able to deliver other things that are needed by the market.."

Supportive rather than directive role:

Both of the informants, the deputy manager and the EDP manager, perceived the role of IT as being supportive to the business strategies rather than directive:

Business Trends

IT to support

Role of EDP manager and IT as perceived by the deputy manager

".. it is difficult to see IT heading the business, because by itself IT can't deliver anything.... I guess at more central level at general management when they try to put things together, the IT people may have bigger role.. it is there but it is difficult to direct business with IT.."

A More strategic role for WAN and electronic banking within the coming five years:

To compete with the international banks, and to overcome the disadvantage that the bank had when compared with local banks operating in the bank's strategic markets such as the Saudi market, the deputy manager believed that there would be an increasing strategic role for an electronic banking system linking the bank to its remote clients and the wide area network (WAN).

He claimed, however, that for the time being the pressure from the bank's clients was insufficient to warrant immediate changes, leaving enough room for the bank to catch up with its competitors. His rationale for the above account was as follows:

".. the Hexagon system, which is quite a sophisticated system and people who have used different systems tell me that it is one of the best, OK but by itself, the Saudi British Bank... does not mean that they will have a significant advantage, because it is one of the components in the whole process. I think in due course technology will become more important..

... many customers don't have that flexibility, they are not a triple A rated companies... I think that time and type of business factor is still little way away. It gives enough time for the other banks to catch up..."

Similar role IT played for the banks:

Both informants believed that the banks were utilising the technology in very similar ways. As mentioned above, the deputy manager believed that there was no sustained competitive advantage derived from using IT, and the effects of IT were perceived to be ephemeral, as they were easily copied within a short period of time.

The EDP shared the same views. He observed the following:

- the banks were similar to each other in the way that they used IT;

- the banks drifted in the same direction the IT was leading them to;

- the bank's guidelines for adopting IT were its requirements and its IT status as compared with its competitors:

> ".. I would say that the usage of technology is the same for every bank.. you have a requirement. you are falling short of something. you know that you are weak on that point and you have to enhance it.. as far as I can see. if you want to utilise the technology you have to be governed by these roles. There is no way that you can be better than the other banks. Technology.. we are going with it. We have to understand it.. we have to be able to use it. I don't know that there are differences of using IT between this bank and other banks.. I would think that the objectives and directions are the same..".

118

Main IT developments within the bank:

Historical Background:

According to the EDP manager, the bank started automating its operations in Bahrain in 1980. Before that date, the bank operated manually.

The first system that was installed in the branch in Bahrain was IBM system 34. The bank then upgraded to system 36 and finally to an AS 400. As for the software system, the core banking operations run on a Kipiti system. At the time of this interview, the bank was in the process of upgrading its Kipiti banking application system to 'Equation 3' which runs on an AS 400.

System openness and internal integration:

The bank was in the process of upgrading its 386 PCs to 486 PCs and giving its employees more PCs to cover the different functional areas. IBM had made its AS 400 system open to communicate in a PC-based environment. The bank selected the "token ring" communication system to interface the AS 400 with the LAN. Moreover, it introduced client-server technology in the bank. The reason for upgrading the PCs was to enable the users to use the Windows applications that run faster on 486 PCs. Accordingly, the bank's employees could access both applications placed on the server as well as the AS 400 system from their PCs.

The link between the PCs and the mainframe would not have been possible without the advancements in both the IBM AS 400 architecture, and the "Equation 3" software.

Delivery systems:

Delivery systems such as the ATMs were introduced into the bank in 1989-1990.

Phone banking was recently introduced (1994). It provided two main services, one to the public in which information about the bank's services, exchange rates, and interest rates were disclosed, and the other to enable the bank's clients to bank through the phone banking system.

Enhancements to electronic banking were in the pipeline. The system was mainly designed to enable the corporate clients to interact directly with the bank's systems from their premises. Through this system, the clients could generate their Letter of Credits (LCs) and Letter of Guarantees (LGs) automatically, in addition to transferring funds between their accounts.

Another project that was in the pipeline was the creation of a Wide Area Network (WAN) upon which future delivery systems could be based.

The bank also introduced some IT based products in 1993 such as the Visa charge card. At its headquarters level, the bank was evaluating the introduction of a system to combine multiple cards into one card, and was in the process of linking the Visa card system with the ATMs. The bank was preceded by other banks in Bahrain in introducing the credit cards and linking them with the ATM systems. The branch in Bahrain was offering Visa cards only to a limited number of its customers - the high worth customers. Other local banks were very aggressive in their card business. They were providing the cards to a wide range of clients, regardless of whether or not they had got an account with that bank. In response to the competition from other banks, Foreign

Bank Two was in the process of increasing the volume of its Visa business by providing the card to a wider range of its customers.

Other projects:

The bank was in the process of automating the fund transfer system in its branches so that the Swift system could be used without the need to manually transfer the transactions from the branches to the main office in Bahrain. This project was expected to decrease the workload in the main office and enhance the branches' response to its clients. "Equation 3" was needed to interconnect Swift to the AS 400.

Reasons for embarking on IT systems:

Progress with the hardware vendor:

As will be discussed later in this case study, the bank maintained a long relationship with IBM, which included progressing with IBM platforms. To use the EDP manager's words:

> ".. if IBM are stopping to support the system .. if the technology moves up and you stay behind, it is worthwhile to catch up with the up to date technology and to up grade yourself..
>
> .. Our main office kept rethinking of re-enhancing and redoing things so they came out with system 36, and we went for some time with it until we heard that IBM are upgrading all of their mainframes to AS 400, which we have now. So now we are nearly at the top of the range. We are catching up with technology as we progress with IBM..".

Limitations of the old infrastructure:

The major developments that the informants discussed were related to redesigning upgrading the bank's infrastructure. As will be mentioned next, upgrading the AS 400 enabled the mainframe system to be linked to the PCs, which had been upgraded to 486. In addition, the introduction of the LAN enhanced the responsiveness to the clients, as mentioned earlier.

A major infrastructure development was the upgrading of the computing system from system 36 to AS 400 and then upgrading the AS 400 to a higher model in the 400 series. to enable it to run "Equation 3". Without upgrading the hardware system it would not have been feasible to install "Equation 3".

"Equation 3" enhanced the bank's ability to meet more of its business IT needs, as new modules could be added to the main system whenever there was a need. This feature had not been feasible within the bank's old system:

> ".. with IBM 36, I could not put corporate banking, because it was too slow, it did not have the capability. But now with the AS 400, a different architecture, the system is able of sending and receiving data freely.."

> "..[with] the credit risk management system, the credit manager will have a better control over the customer. We will know how much we are exposing ourselves, what is the profitability from this customer, is it worthwhile going to this customer or not... Equation 3 has a very powerful reporting features, and another feature ..it has a multi-language support. So it can be tailored to our requirements..."

Improving efficiency:

The EDP manager gave a number of examples of how the new system was expected to improve efficiency within the bank. The following quotation describes how the client

server technology and the PC environment were expected to improve the employees' efficiency:

> ".. we came into a conclusion that a lot of people are using spreadsheets. A lot of people are doing a manual work. At the end of the month they are getting behind. We thought that it would be the best way of enhancing these people by buying a new hardware and training them properly so they transfer all the manual task into an automated tasks. The objective of this exercise is to make life easier for them and to enable them to finish their work at a very short time..."

"Making life easier" was the phrase that the EDP manager repeated on several occasions:

> "when the system is faster it will make life easy for everybody, also this will make life easier for the customers..
>
> O.K. we thought of ourselves.. to make life easier for everybody, but at the same time we thought about the customer.."

The goal behind the update was to enhance the efficiency of the employees through using new tools, some of which were analytical.

Agreements with different institutions were made to train the employees in the use of the new tools that they would be exposed to. The EDP manager said that there were training activities taking place at the headquarters level in which he had participated. IBM arranged some of these training activities. Microsoft applications that run on the PCs were among the tools on which the bank's officers would receive training.

Another example of how the new IT arrangements would improve efficiency was mentioned earlier in the discussion of the new "Equation 3" risk management system enabled users to make better decisions once they were better informed about their position and their clients.

In order to achieve a faster response rate, the bank was in the process of automating its

manual filing system. Moreover, they were also in the process of increasing the integration of the bank's remote locations and enhancing the bank's ability to access data from any location.

Availability within the network:

Some IT initiatives were introduced in Bahrain because they had been developed by the bank elsewhere and introducing them in Bahrain required a minimal marginal cost. The informant gave examples of systems that were developed for what the bank perceived as key markets, and then the systems were introduced to other markets. One example of this was telephone banking. The bank developed it to meet the market requirements within the bank's home land, and then pushed it onto the network so that other branches could benefit from the developed systems. The following quotation by the informant describes this driver for some IT initiatives:

> "... our London office may need certain things because they are facing competition in that market. When that is developed by the bank or bought from outside and it is in use in London, then adding it to other location is suggested. They can do it because it does not cost very much... and it is already working in one location. It does not mean that the other branches that were going to get it have not thought about it, but it did not feel that it is crucial..."

Improving the services and increasing customer loyalty:

Improving services and, subsequently, customer loyalty to the bank were also reasons for renovating the bank's IT systems. These objectives could be achieved as a result of improving the bank's efficiency, according to the EDP manager.

The delivery systems and IT related products, such as credit cards, were mainly directed at the "high worth" individuals, as the EDP manager had called them.

Matching the competition:

A salient driver of IT strategy was the competitors:

> ".. we look at the competition which we consider all the time.. and we try to develop on that basis... see what they are providing... see is it needed by our customers or our target market..."

The EDP manager referred to IT systems that the bank had provided in terms of their competitive necessity, since other banks were also providing them. Even though these systems did not generate revenue for the bank, the bank still had to keep up with the technology:

> "... phone banking, we have [spent] thousands and we made not a penny out of it.. I am providing a service and it is there but I am not getting any thing out of it... but why we went into phone banking, we have to go, to catch up with other banks, with technology...

> "... you come and say you have the ATMs why don't you use it over here. Somebody will come and say it is too expensive. But soon you find that the other banks are providing the ATMs, you have to [provide it too].. whether you have ten customers using the ATMs or 100, you only know after sometime..."

> " .. when we thought about the ATMs, we looked at the customer.. but the amount, the numerous amount we were spending to buy the NCR ATM, buying the tower NCR, buying the software, buying the communication for that.. we have to serve the customer right, and when everybody is doing that we have to catch up. There is no way around it.."

> ".... the technology progressed and all the banks have to progress with it..".

Improving the bank's image:

> ".. all of the successful banks have to up grade. They have to catch up with technology. There is no way that you leave yourself behind. Everybody in the front. They are talking language that you don't understand. I think that this will give a very bad image to the bank and it won't be any good for anybody..."

The quotation above shows how the EDP manager perceived the importance of catching up with the competition. IT is important because the others are doing it, and in order to build a good image for the bank they have to "catch up" with the technology too.

Business needs and customer service:

Another reason for embarking on IT strategies was to serve the bank's business strategies. An example was the renovation of the bank's 386 PCs and upgrading them to 486 PCs, which were linked through a LAN and integrated with the AS 400 system. The aim of this project was to provide the bank's international customers, especially the Saudis, with a prompt response.

Since F2 is a wholesale bank, the strategic role of the electronic banking system in the coming years for supporting the bank's business goals internationally was stressed by the deputy manager.

Relationship with Vendors:

Networks between the banks:

The deputy manager believed that the international banks in Bahrain and in other regions - especially the Saudi market - in which the bank competed directly with the resident banks, held an advantage by being part of a wider network. Through this network they acquired the know-how assets for adopting their IT systems. Examples of these network connections in Saudi Arabia, mentioned by the deputy manager, were the Al-Faranci bank and its connection with the French banks, the Saudi American Bank and its connection with Citibank, and the British Bank of the Middle East and its connection with the Hong Kong and Shanghai group.

To keep the bank informed about the latest trends in IT, both the deputy manager and the EDP manager said they had established close relationships with the hardware and the software vendors.

As will be explained in the coming section, on the strength of its strategic relationship with other system developers, IBM became a strategic partner for the bank.

Strategic Relationship between the hardware and the software vendors:

In my meeting with Gulf Info. Tech. (a pseudonym), a local IT vendor, the marketing manager mentioned that there was a strategic alliance between IBM and many software houses that developed applications for the financial market. Such a relationship created a switching cost for the banks that were dealing with IBM.

Kipiti, a software company, was one of the main software houses that maintained a strategic relationship with IBM, according to the informant from Gulf Info Tech. In my interview with International Bank Two, I wanted to investigate more thoroughly this type of relationship between IBM and Kipiti so I asked the EDP manager whether there was a strategic relationship between IBM and the software houses. He replied:

> "Well definitely, I think that Kipiti has done that. In fact Kipiti was dealing with IBM very strongly, especially for the enhancement of their super machine [AS 400]... they sat with IBM and said we want to utilise your system and understand it more.. they understood the integrity of their system, and what is the relational databases and how to utilise it for the Kipiti system. I think that there is a very strong co-ordination between IBM and Kipiti people. So that is why every time there is a change, they fully understand the concept.. on that basis they designed Equation 3".

IBM and Kipiti were repeatedly mentioned by the informants when discussing the renovation of the bank's system. Other banks such as Local Bank One were also users of

IBM AS 400 and the Kipiti Equation 3 system. These examples show the type of strategic relationship between the hardware and the software vendors.

Networking with the vendors- A strategic relationship:

Strategic relationship with IBM:

In the absence of networks between F2 bank and other international banks - similar to the networks amongst the international banks discussed above - from which they could seek knowledge asset about the strategic use of IT, the informants said that the bank sought its vendors' aid to acquire the "how" knowledge about their strategic approach to IT. Such relationships with the vendors helped the bank to:

- catch up with the competitors;

- develop/update the bank's IT infrastructure and systems (hardware and software);

- decrease the perceived risk of system development failure;

- develop training programs to utilise these systems;

- provide consultancy services;

As a consequence of the bank's relationship with IBM and Kipiti, it had made reciprocal agreements with other banks who were also clients to the same vendors. These agreements allowed the bank to use the other banks' systems as a backup whenever there was a failure within their system. Therefore, the fifth point that I would add to the above list would be:

- to create links with other banks, who were clients to the same vendor, in order to enhance the reliability of the banks' systems:

> ".. we are not at the head of the list nor are we at the bottom. We have an on going development.. we are working with different companies which are developing software and hardware.. we have a good link with Microsoft and IBM..
>
> .. we don't have a tie with other banks, but we do have a tie with hardware and software developers and specialists in banking systems like Kipiti which has an office in Dubai.. because we use our accounting system as Kipiti, whatever developments they have, they keep us informed.. they update us. We have training programs with them. There is a new thing that we are finalising, with IBM also, because we are in many locations and sometimes we have to make institutional arrangements there are back up facilities and also common hardware in different locations..
>
> ... the fact that we are linked to one or two does influence what we do. If we find that particular house is overtaken and not developing, we may break that relationship and go somewhere else..
>
> ... you can buy from a vendor who can give you a turn key project on a particular utilisation so you don't have to spend your time developing it in house or going and buying it from another bank..
>
> .. we listen to the people who are associated with us, so IBM may come up with certain things and they will advise us. We consider them as consultants.."

The above was the deputy manager's argument about the role the vendors played. The EDP manager shared the same views with the deputy manager. His views about the role of the vendors are summarised by the following points:

- played the role of the informant of any changes within the technological environment;

- provided the bank with the required expertise and insights about how to achieve the bank's goals;

- provided training for the bank's staff;

- reduced the failure risk associated with initiating and implementing major IT projects.

The influence of IBM over the bank was not just in the adoption of the IT system, but it spelt out the way in which the bank organised its IT division. Though I do not have a full description of how the bank's IT international division was structured, from what the EDP had said, it seemed more likely that the bank had consulted IBM about the way that the organisation of the division was carried out[1]. The organisation was flattened to reduce the levels of hierarchies, as was the case at IBM itself. Therefore, the following can be added to the above list of vendor roles:

- played the role model for the bank with regard to its division organisation;

- The above may provide an account of why the bank maintained a long-term relationship with IBM. The EDP manager added another account which was no less important than the above. He said that there was a long-term relationship between the two in which they as a bank knew IBM well.

> ".. some times it is a very risky business when you plan for something and it does not come right. You see yourself investing and your investment go away.
>
> What we do in this bank, this department, we always go into the market and study it properly, and I told you for this computer re-engineering [he meant the renovation of their IT systems - then he talked about the organisation structure] .. we knew that IBM has .. flattened all the hierarchy, and they were very successful. We said if IBM could do it, why can't we do it. We said why can't we be more productive and constructive on our approach..
>
> [the informant then read in Arabic the following: improve the work through reducing the managerial hierarchies] so the hierarchy has flatten down [the EDP manager continued in English]."
>
> ".. we embarked on these new hardware, they came in and we sat with them and we said this is

---

[1] An interesting observation was that Local Bank One, which maintained a close relationship with IBM, was talking about flattening their hierarchy; however, there was no reference in that bank to the role of IBM in adopting this type of structure in their organisation. Was that the recommendation of the consultant, KPMG, or IBM?

the picture that we want to see.. what is the best way of doing it.."

".. because there were too many technical aspects about it that we did not know.. so they were enlightening us as they came along.."

".. it is worthwhile to continue with them, because first of all we have a lot of knowledge about IBM.. and we were for some time with them, that's why we stick with IBM.."

Relationship with the software vendor - strategic ties derived from the bank's relationship with IBM:
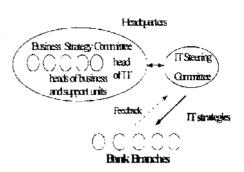
The bank had maintained a long relationship with the software vendor, Kipiti. It seemed that this relationship derived from the bank's relationship with IBM. As mentioned in the main developments section, the bank started with IBM system 34, then system 36. and lately it has upgraded to the AS 400. The bank's commitment with Kipiti came as a result of its commitment to adopt the AS 400.

It is worth mentioning that the agreements between the bank and the vendors were made by the bank's headquarters.

IT strategy formulation:

The formulation of IT strategy was centralised at the head office level. Any major investment decisions or new architecture designs within the bank's branch in Bahrain were centralised and approved by the headquarters.

The EDP manager participated in a yearly meeting that included all EDP managers of the bank from all the branches world-wide. The aim of these meetings was to get feedback from all the EDP managers and discuss the bank's IT strategy with them.

Figure 1: formulation of IT strategy

In order to formulate the bank's overall corporate strategy at the headquarters level, there was a business steering committee that included the business' divisional managers as well as the head of the IT division. Members of the business steering committee met on a yearly basis with their shadow managers from the bank's branches to get feedback from them.

As Figure 1 indicates, the formulation of the IT strategy was influenced by feedback from the branches. For example, the quotation provided below describes how the bank's overall IT infrastructure was influenced by the complaints from the branches about IT infrastructure deficiencies in supporting the bank's business needs:

> ".. for instance the upgrading into the AS 400, when we thought that the system was slow and we had problems, we wrote to our head office and they said that they were already discussing and hopefully we will get it. EVERY TIME WE HAVE PAINS AND PROBLEMS WE START CRYING- I need a system, this system is not giving me what I want, this system is becoming very slow..".

The EDP manager described how the branches' IT requirements were sent through the EDP managers' communication channels to the head office. It is worth noting from the quotation provided below how the bank's IT strategies where highly dependent on 'off the shelf' modular systems such as 'Equation 3':

> "What we do, every year we talk to the users.. what you require? We get their feedback. We consolidate with all the branches and we send to the main office. This year, 1995, I need Swift. To connect all of the commercial branches to Swift, I have to have a sort of software on my AS

400 so I have to have Equation 3. The system will generate the conformation for me, the advises and the messages.. so I don't have to key them again..".

Defining IT needs for the branch in Bahrain:

Within the bank's branch in Bahrain, there was a steering committee consisting of the branch CEO, the head of the departments within the bank, and the EDP manager. Through interacting with the representatives of the other departments within the bank, it was the EDP manager's responsibility to define the branch IT requirements and infrastructure needs and then to seek solutions from the headquarters.

It also seemed that the EDP manager played a political role in exerting pressure on the headquarters for acquiring more IT related resources. One example was his attempt to upgrade the AS 400 so that "Equation 3" could be used. The EDP manager had failed at the beginning, but won his case later on. However, in every case, the final decision was made at the headquarters.

Slow responsiveness due to the centralisation:

The bank introduced its ATMs and phone banking only after the leader banks in Bahrain had done so. The EDP manager argued that their commitment to an international IT strategy affected their response rate:

> ".. actually we have schedule and we rely heavily on our head office. As people come from the head office, it takes time. The other banks may talk to a vendor and they will bring it. In our case we talk to the head office and they have a schedule and you have to abide to that schedule. That is why we are a little bit behind.."

Role of the EDP manager:

Both informants, the EDP manager and the deputy manager, described the EDP manager's role as supportive to the bank's corporate strategies, rather than directive.

The deputy manager emphasised that the EDP manager's role was restricted to defining the means through which the users' needs and the business goals could be met, by determining whether the bank had the appropriate IT infrastructure to support the business and user goals. If this was not the case, it was his responsibility to define and seek the necessary IT solutions and implement them.

> ".. the treasury, the corporate finance or the syndicate business that you try to push. it is their people that say that their focus is the way the bank has to go. Now each of these have technology needs to support it, or need certain improved level of technology. Whatever direction the bank takes, the technology manager has to work with them. But he will not say focus on this particular area.. it is a supportive role.. it is again like the operations, the back office processing, whatever direction the institution goes, the back office has to support that.."

The EDP manager worked as a liaison with the headquarters. Through his reporting lines with the head office and through his participation in the yearly meetings at the headquarters, he channelled the IT needs to the headquarters and sought solutions from them.

Business strategy:

The formulation of the business strategy at
the branch in Bahrain was directed by the
overall corporate strategy of the entire bank,
which originated at the headquarters. As the
deputy manager described it (see Figure 2),
the process was a two-way exercise. The
overall goals and policies from the head

Figure 2: Business strategy formulation

office represented the guidelines for the regional branches to follow, while, the regional
branches provided feedback about business opportunities to the headquarters. According
to the EDP manager, since the bank branch in Bahrain was operating in different
markets within the region, it had more flexibility to design its own strategy, as long as it
conformed to the guidelines included in the overall business policies set by the
headquarters. For example, the bank could not go into financing mortgages in the
Middle East region since that type of business was against the policy of the
headquarters. The bank subsidiaries, such as that of Australia, had more autonomy in
setting their strategies compared to other branches.

Management attitudes towards IT adoption:

Both informants said that there was an appreciation by top management for the role that
IT played in supporting the bank's business. Moreover, they appreciated the top
management support for IT initiatives such as the renovation of the branch infrastructure

system and the adoption of new application systems such as "Equation 3", which needed large investments back for acquiring the technology, and training the branch staff in Bahrain to use it. Without the top management support, these big investments and changes in work processes could not be achieved. Nonetheless, the EDP manager said that due to the large investments that the bank had made in IT, it was cautious and "choosy", and would wait until the IT systems had been in use for a sufficient length of time before it gave consent to big IT projects:

> ".. we always try to be choosy, to search, to study... before we buy any thing, the people at the eight offices set and decide. We are little bit conservative on this approach, that is why we don't have problems..
>
> .. it is worthwhile to catch up with the technology and upgrade yourself... We are spending in fact millions.. now we have signed new contract with Kipiti for Equation 3. We have paid around half million pounds for that.."

The bank's cautious approach delayed upgrading the AS 400 and implementing Equation 3, though those at headquarters revised their decision later on:

> ".. Once I wanted to upgrade my AS 400, and a team came from the head quarter and said why do you want to upgrade, only the other day you invested half a million on buying it. When they walked out they said you don't need it. I did not need to invest at that time. But now after Equation 3, after the calculation they are convinced that definitely there should be a change before we go to Equation 3.."

Problems associated with the adoption of IT:

Resistance to change:

Both of the informants, the deputy manager and the EDP manager, argued that the adoption of IT was accompanied by resistance to change from some of the bank's employees:

"Q. Is there any cultural gap between the business people and the IT people?

Informant: Sometimes it exists. Sometimes we want to enhance and some people don't want to change. Technology is running very fast, there are people in the bank who don't want to change... obviously there are some resistance from other people, different thinking of mentality between them and us. The thing that those old people who are being in authority for quite some time... They keep changing them to bring fresh blood to the bank.

.. some times there is a clash of ideas and they have to go by what we say.. now when we encourage them to go from manual, and to bring these new PCs, some say that I am happy doing this manual report. We say no there is something called Excel... we are trying to close that gap. But resistance is there.. it clashes with the EDP progress. We want to progress and the guys want to put back..". The EDP Manager.

".. some people don't like to change. And they change reluctantly. Unless they are forced to use it on a day to day basis they try not to..". The Deputy Manager.

According to the deputy manager, the bank uses "the carrot and stick" approach to introduce change within the working environment. Training was the strategy that the deputy manager mentioned as the means to create an environment in which people could comfortably use the new tools that IT offered to them with minimum frustration. The "stick" that the informant talked about was the salary and promotion packages that were available. People that were less willing to adapt to the new job requirements would receive less support from the bank:

"the stick is when looking at the salary packages and other packages that come with you in terms of future advancements with the organisation... if you are sticking to your old ways then you have to advise those people that the bank can't support their type of thinking.."

To achieve change in the perception of the organisation with regard to the role of IT, the informant believed that continuous education was the key to achieving this goal. The bank's relationship with IBM was a source of education to the organisation. To use the informant's words:

".. we listen to people who are associated with us so IBM may come up with certain things and they will advise us. We consider them as consultants..".

137

Foreign Bank Three (F 3)

Introduction:

Foreign Bank Three was a subsidiary bank of the Islamic Financial Group (pseudonym), registered in Europe. The Islamic Financial Group owned more than 50% of the bank's share, while the remainder of the shares were owned by citizens from the Gulf region. The bank operated internationally from Bahrain where its head office was based.

This case summary is based on my interviews with four informants: an Executive Vice President (EVP), a Senior Vice President who was head of the IT department, a Senior Vice President within the investment department, and the bank's CEO. All interviews took place within the informants' offices and were tape recorded except the interview with the CEO who preferred that I take written notes.

The EVP was 46 years old with 20 years banking experience in Europe, USA, and the Middle East. He joined the bank in 1986. His educational background was in accountancy, business administration and banking. His nationality was non-Bahraini.

The Senior Vice President - IT manager was 37 years old. He had had 12 years experience in IT, of which 9 years were in banking. The informant had worked with international banks, such as Chase Manhattan, before joining F 3 in 1988. His educational background was in mechanical engineering, and his nationality was non-Bahraini.

The second Senior Vice President was working within the investment department and was 33 years old. He had obtained his ECCA qualification from the UK. He had worked as an internal auditor and financial controller and then as an investment manager within the investment department. He joined the bank in 1988 and was a Bahraini national.

The CEO had worked with Citibank before joining Foreign Bank Three. He was a Gulf national. No date was available for when he joined the bank, although he started working in the bank before the above informants.

Business focus:

Serving a niche in the market which attracted more competitors:

Foreign Bank Three was operating based on Islamic principles and was serving "the Islamic banking market niche".

Islamic banking is comparatively new when compared with the conventional banking business. Nonetheless, it has been experiencing increasing competition as more conventional banks entered into this type of business.

The EVP estimated that sixty billion dollars were been handled within the Islamic financial institutions, a fact which attracted conventional banks to enter the same type of business.

Conventional banking institutions such as Citibank, for example, entered into this type of business and competed directly with F 3.

Foreign Bank Three started as an offshore wholesaler operating from Bahrain serving the regional markets.

The year 1987 was a turning point for the bank. It adopted an expansionary strategy and directed its business internationally, within the markets of significant Muslim population, with special attention paid to the South East Asian countries such as Malaysia, Indonesia and Pakistan. The bank entered into the retail business and expanded its branch network in Pakistan. Within Bahrain, the bank had obtained a Fully Commercial Banking license and operated in the Bahraini market serving corporate clients, businesses, as well as providing retail services to individuals. It did not focus. however, on consumer financing, as did other local banks within the same line of business.

The EVP said that the bank earned its revenue through the following services:

- Consultancy services

- Private banking services

- Different investment portfolios in projects with different risks and returns;

- Banking services - finance of domestic and international trade, various investment accounts, current accounts, short term financing on the basis of Morabaha. Mosharaka or Modaraba[1], etc..

- Development of investment instruments.

---

[1] Different forms of Islamic banking finance.

Role of IT as perceived by the informants:

All informants perceived IT as crucial to the bank's ability to achieve its corporate goals and maintain a favourable image for the institution. This was particularly important since it was a newcomer into the market as compared with the well-established conventional banks.

The CEO described the relationship between the bank's goals and Information Technology as a "Catholic marriage", where IT could not be separated from the bank's strategic thinking. Nonetheless, the informants believed that IT was not directing the bank's corporate strategy. In contrast, the informants believed that the business requirements of the bank were directing the IT strategic thrust.

The EVP perceived IT as having a profound impact on the banking industry as a whole, and on the bank-client relationship. Moreover, he perceived their IT as responding to the impact that IT made within their environment, and believed that IT was utilised universally since there was nothing unique about it. Investing in it, had, therefore, become a competitive necessity.

Within the internal boundaries of the bank, the EVP believed that IT played a crucial role in enhancing efficiency by supporting the internal operations of the bank, which had had a favourable impact on the bank's image. IT also enabled the bank to control cost factors, despite an increase in the volume of transactions:

> "The other side is being in a position to give the fastest and most reliable service to our customers. This could only be achieved through the electronic medium. Now when we send a statement out to our customer, we are sure that the statement will reflect the reality. This has enhanced the confidence in our bank and it has improved the image of the bank tremendously.."

The EVP also perceived IT as being crucial in supporting the bank's strategy to innovate and introduce new products:

> ".. whatever product we develop now has to take in consideration the electronic data processing impact on it.. that means our product division is in tune with the EDP department. Without the house clearance from the EDP department, no product could be launched by us no matter how useful it may be..".

The Senior Vice President for credit marketing shared similar views and added that IT was crucial for enabling the bank to pursue its expansion strategies and penetrate new geographical markets. Moreover, he perceived IT as a means to improve customer services.

Within his own functional area, the Senior Vice President perceived IT as crucial for his work, as a credit marketing and financial controller manager. The informant mentioned that the application systems that ran on the bank's main system and PCs were used heavily in his work. To stress the importance of IT in managing the bank's credit risk position on one hand, and in interlinking the bank's operations in the different markets with its headquarters in Bahrain, on the other, he gave the following example:

> ".. we have an open system with network... In Saudi Arabia.. when they go wrong, immediately I can change from here. I can implement decisions to correct the deviation. Before I could not do this. I would have to wait until the end of the month until I get the report. Business means time. Decision must be timely decisions.."

In order to assist the bank in providing better consultancy services, MIS was perceived as strategic to the bank, without which their decision-making qualities would suffer:

> "... MIS plays a very important role. A business without MIS can't operate. Imagine the managing director wants to know where we stand and what is the risk in one area. He can take decisions immediately. He can access our system from his house. He has the facility..."

He added that IT, and MIS in particular, played a strategic role in enabling the bank to evaluate proposals from potential clients in a speedier and better-informed manner, one factor that had enhanced the bank's competitiveness.

The following quotation sums up the Senior Vice President's perception about the role of IT:

- " IT plays a major role in achieving the objectives of the enterprise. It is a very important means. Without it I can't achieve my objectives.

- It is very crucial for my expansion plan.

- It is crucial in the day to day {operations}.

- Crucial in enhancing my services.

- .. IT enhance our decision making.

- IT plays an important role within the financial institutions as a whole. So the soul of it will span over each area...".

In my meeting with the IT manager, he shared similar views about the role of IT. These views can be summarised in the following points:

- "gain better market footing"

- "have better grasp of [the] market data and customer information"

- support the banking products.

To quote the informant:

".. from the past one or two years, their vision is that they can utilise IT products to gain better market footing, and to have better control for their market data and customer information. I think the first factor that I mentioned is that they can utilise the IT products effectively for marketing .."

to the customers. I think that this is a very important vision that has been developed in the past few years."

In addition to the above, there was also the belief that IT played a similar role in the rest of the banking industry, and that the other banks capitalised on it in more or less the same way. Such institutionalised belief created a reality for the bank to which they have aimed to conform:

"Q. Do you differ from your competitors in the way that you use your IT to serve you?

EVP: Well.. I think this is more or less universal now. Any modern organisation is bound to use IT somehow in the processing of its activities. We may not be very unique in that. But at least we developed a sense of dependence on it, may be more than our competitors and we have faith in investing heavily in it. In fact this what has put us ahead of the crowd.. "

Greater resources for the conventional banks:

The IT manager named banks such as Citicorp, Chase Manhattan and Chemical Bank as being potential competitors for their offshore business. The informant said that these banks had more resources and expertise and were far more advanced in terms of technological support than F 3. Nonetheless, the bank had put a great deal of effort into bringing its automation in line with these other banks in order to meet the expectations of its clients. He said that such challenges had put a lot of pressure and a great burden on the IT division and resources.

Main IT developments:

Unique banking requirements:

There were no 'off-the-shelf' application packages serving the banking industry available from vendors (e.g. IBM and their software partners), that F3 could depend upon for acquiring application systems that were tailored to their core banking needs. In this respect, the bank was perceived by the informants as disadvantaged compared with the conventional banks which were able to buy their systems' requirements from the vendors and thus save in terms of development costs and risk.

Dependence on internal resources:

As a consequence of the lack of external support from the vendors in terms of ready made systems, the bank decided to depend on its internal resources and build its IT systems from scratch. As will be discussed later, resources were directed to this project, including more financial support, more recruitment, and changes in the organisational structure. As noted from the recruitment dates of the informants forming the top management end, these three top management informants were recruited between 1986 and 1988, the date at which the bank started its expansion strategy. The IT manager was empowered with more authority after he had been supervised by the operations manager. He was promoted to a Senior Vice President reporting directly to the CEO.

Main developments:

The bank started with little or no IT support. The bank's internal developments were first directed at supporting the bank's offshore operations and wholesale activities, but as their strategy changed, they started to develop systems to support their retail banking operations. ATMs were installed in the bank in Bahrain and phone banking was in the pipeline.

A major system that the bank developed was the Islamic Banking System (IBS), which was a modular on-line system that supported the bank's core operations as well as their portfolio of products and instruments. The broad objectives behind IBS were related to supporting the bank's operations, through building a modular system that allowed different application systems to be integrated with the main core system, as need arose, with minimal cost and maintenance, as well as providing an efficient MIS.

Scrapping the old system and building a new one:

The bank scrapped its old system, which was running on a Wang computing platform, and transformed all applications into an open system infrastructure design. With the open system infrastructure design, connecting new hardware to the core system was not a problem, as it had been with the old system.

A Local Area Network (LAN) was also introduced into the bank. Almost all users had had their PCs connected to a server through the LAN. In addition to this, they were connected to the UNIX environment on which their core banking system and databases existed. The users were thus able to run both the PC applications from the server and the main banking applications in the UNIX environment from their PCs. The IT

manager described the above infrastructure scenario as being the global trend which the banks had to follow.

The bank was embarking on a project to link its branches world wide. Moreover, they were planning to introduce a multilingual electronic banking system to enable their international customers to interlink with their systems. This electronic banking system was a future project that the Senior Vice President and the Executive Vice President said that they were discussing.

Reasons for embarking on the bank's IT systems:

Expansion strategies and support of business goals:

A main driver of the bank's IT strategies was the bank's expansion strategy, adopted since 1987. To assist this strategy, the bank needed the support of IT systems to penetrate new geographical markets, and support their new line of business. Expansion in the bank's branch networks, the introduction of new innovative products, and consultancy services were amongst the areas that needed major IT support:

> ".. as I said up to 1987, we were very small offshore bank, with a limited balance sheet, serving a limited number of customers within a limited geographical location. But from 87 to end of 94, in about 7 years, we have expanded tremendously... and automation has been geared to adopt the change and the changing requirements of the bank..". The IT manager.

> .. we have to be able to modernise our products to adapt them to the technology as we grow. I can see a high correlation between our survival and to our growth. These things are linked together. It is IT that could put out the value very widely and make it more acceptable. Because you could not sustain a client by giving them a very old fashion approach to business."

> ".. the main source of our revenue is basically service - banking service, investment consultancy fees and that sort of things.. we drive our income from the management fees, on a different mutual funds that is managed by us. Another area that we are venturing in, is basically a venture

> capital management type of thing. Assisting companies to .. act together, and try to put some value on the existing assets to be able to float their shares into the public. So basically we are consultants... And at the same time we do a lot of investments in projects.. analysis of projects .. as well as taking larger syndication to mobilise large credits for specialised purposes. I would say that IT has been useful in all four different lines of business which are the sources of our income.."

As will be discussed later, the expansion strategy was accompanied by a change in the bank's culture and perception of the business implications of IT. Resources were mobilised to assist the IT division to come up with a new IT strategy to support the bank's business strategies.

Create systems to meet the market needs in one area and introduce, once available, to other areas:

The bank developed its systems to meet the needs of markets with higher potentials; and once available in their network, they introduced them to other markets. One example of this was the phone banking system. The bank developed it in Pakistan, and once it was tested there, they were planning to introduce it in Bahrain.

Infrastructure related drivers:

The bank's old IT infrastructure faced severe connectivity problems. For example, the bank had entered into the retail business for which the ATMs were essentially delivery systems. The Wang system suffered from connectivity problems that prevented smooth introduction of the ATMs.

The IT manager anticipated that there were other technical problems and infrastructure limitations associated with the Wang system, and hence it was a barrier between the bank and its strategic goals. Moreover, Wang was facing financial problems, which might lead to future problems getting support for the Wang system.

The deficiency of the old infrastructure and gloomy future prospects of the supplier spurred the bank to scrap its old system and rebuild its system on a new basis:

> "...we are on the UNIX environment, we are utilising the UNIX machine for data processing and using the network to get access from one user to another or to the main system and workstation. This is the change in the hardware globally. If you look at the global hardware changes that are taking place, mainframes are being eliminated and applications are being downsized or right sized.. with the concept of open system and open computing, I think that organisations have to review their long-term and medium term technology plans. To review their existing systems strategy against the market trends. Because if you don't do that then at a certain stage you will be forced to look at that strategy and if you are forced, you have to really see things in a more confusion...

> ... In our case we looked at the technology change, we realised the technology change and we decided before our expansion plans... because we were going to a major expansion plan and we did not want to buy hardware that would be redundant after a few years... so we changed our hardware strategy ... we have adopted a LAN based technology with UNIX servers to be implemented at all locations...".

Support operational needs and improve efficiency within the bank:

IT strategies were driven by the need to automate the bank's core banking systems and back office operations. As mentioned earlier, due to the bank's unique operations, there were no appropriate 'off-the-shelf' packages to support their internal operational processes. The bank depended on its own resources to achieve this goal.

The informants mentioned that improving efficiency was a target they aimed to achieve by automating their operations. The IT manager said that re-engineering of the processes occurred whenever they automated a manual process within the bank. Improving efficiency through re-engineering their processes, as a consequence of using a LAN and other PC and main system applications, increased the bank's responsiveness to their clients. Moreover, the use of PC applications had reduced the need for secretaries.

Meeting the users' requirements:

The IT manager mentioned that meeting the users' requirements was a driver for the bank's IT strategy. The IT division was serving the needs of the bank's users as well as the needs of users of other sibling Islamic institutions owned by the group.

Matching the competition:

Matching the competition was a driver to the bank's IT strategies, the CEO perceived:

> ".. we are competing with big banks, giant banks.. our clients want the same service, we have to provide it.."

Systems such as the ATMs and related products, for example, were introduced mainly to match what the competitors were offering in the market:

> ".. the force that will push us is the competition.."

> ".. as you know, the plastic money is being the trend in the consumer oriented financial services.. this has put a lot of [pressure] on the banks to modernise and put up with the competition by adapting to the latest instruments and also adapt the operations to the electronic media.." EVP.

> ".. in Bahrain the ATM market is quite mature, there are a lot of banks that offer this service so getting into a retail market without this tool would not be appropriate.. so we thought that we need to have this tool or at least have an equal level of service with the other banks if not greater.. so that was absolute necessity and also since this service was not available in that form that we were proposing in Pakistan, we could capitalise on that.." IT manager.

The IT manager added that they were lagging much behind their competitors when they started without IT support in 1982. However, their strategies were aimed at catching up with their competitors:

> ".. generally our competitors are every bank operating in this market.... If you are operating like an offshore bank, all banks that are operating in a similar manner are your competitors. Now if you see which other banks are operating like offshore, you will find names such as Citicorp, Chase Manhattan, Chemical Bank, these western banks have long history behind them.... they've had better systems 10 years ago when we started without systems.. Today we are not as much behind them as we were.."

Maintain a favourable image:

The CEO as well as the other informants stressed the importance of IT in enhancing the bank's image, especially as they were newcomers as compared to their old and well established competitors. As quoted above, the CEO wanted to match what the "giant" competitors such as Citibank were offering.

> ".. Imagine today if I offer services and I have competitors like Al Ahli Bank, National Bank. They have telebanking systems, they have ATMs, imagine if I come and don't offer that services. How would they look at me. They will say that this is a very obsolete bank, inefficient bank. So I am under extreme pressure to enhance and improve my services to reach that level. To enhance and upgrade, I need the support of IT for all aspects. I rather need it more than them because I am a new bank." SVP- Credit Marketing.

Improve customer services:

All the drivers of IT strategies discussed above are interrelated. The informants, while discussing them, referred to improving customer services as a primary objective for using IT in their banking business.

Formulation of IT strategies:

A top-down approach:

The informants argued that their IT strategies followed a top-down approach in which they were guided by the bank's business strategies, such as their plans to expand, and their plan to enter the retail business after initially focusing on the wholesale business (more detailed discussion will be provided later about the relationship between the bank's IT and business strategies).

A grass-roots evaluation:

The IT manager's role in IT strategy formation started with his grassroots evaluation of the IT infrastructure's ability to meet the bank's business strategies. He recommended that it was unwise to spend on the bank's current IT infrastructure due to the major deficiencies with the Wang platform, as well as the gloomy future prospects of this vendor.

As mentioned earlier, the bank opted for an open environment accepting different hardware peripherals. The main system was UNIX, and the PCs were linked through a LAN using a client-server system. The banks' future business systems were based on this environment. The IT strategy at this phase was more concerned with defining the IT structure and the technical issues related to migrating to the new structure. The IT manager was the product champion during this phase and he was the source of ideas and information for the top management:

> "... with our expansion plan..... we as technologists looked at that plan and saw how much we are going to invest on IT in this expansion plan. We thought that this investment was huge... since the market was changing, the hardware and the software and based on our analysis and study of the market, we thought that this is the right time to review our overall hardware and software strategy..."

> ".. the Wang went into chapter 11 and it was our responsibility to inform the management and give them different various solutions... similarly while changing the strategy, we have to go to them and update them of what is the future perspective of future computing, the open system platform, the networking and so on. And based on our input to them, because they are not technical people, they relay on our input for that decision making so in order to make sure that we get the best decision from them we have to update them very thoroughly of what is happening in the market.. because we don't want a decision that is taken and then regretted later on..."

IT department formulates the IT strategies:

The IT manager said that it was his duty to formulate the bank's IT strategy and then pass it to the bank's top management for approval. He added that the bank's IT strategies were based basically on the bank's strategies:

> "... IT strategy falls within the overall business plan of the bank. When we have a plan for business we try to see where IT will fit into that and how IT will fit into it. Now once that has been defined then it is the responsibility of the IT manager to look at that business plan or that business requirement and then formulate his own system or IT strategy both in terms hardware and in terms of software..".

Committees:

There was an IT steering committee in which the top management, represented by the division heads, and the IT manager sat. The aim of this committee was to evaluate the bank's IT strategies and approve them. In addition to the steering committee, the bank formulated ad hoc committees in which representatives of the users and representatives from the IT department sat. The IT manager said that there was a formal procedure that they followed in determining the users' IT needs. Creating an effective liaison with the users was perceived as a crucial element in effectively initiating and implementing IT projects. The ad hoc committees were perceived as the means to include the necessary involvement of the users.

Participation of the users in the systems development:

The users participated in the development of IT systems. Requests for automation within the different functional areas came from the users through their departmental heads. The Senior Vice President-financial controller, as a user, participated in the

development of the core banking system, IBS, which the bank perceived as one of its main strategic systems:

> ".. I had the opportunity to work as internal auditor, and I was moved directly in the design and implementation of systems. Similarly I worked in financial control. The idea comes from the users' departments, where they feel that they want to do something. Then they pass it to the head of the departments {then they get involved to design the requirements} what is the requirements. Then pass it to the EDP..."

Developments within two main centres:

There were two main development centres for the bank's IT systems. The first was in Bahrain and the second was in Pakistan. Once the systems were developed and tested by one centre, they were introduced to the bank's branches in other markets.

Participants from the two development centres participated in annual meetings. The IT manager in Bahrain was the liaison between the two centres, frequently travelling between the two centres.

In-house development of systems:

As mentioned earlier, the bank depended entirely on its own internal resources to automate its systems because of the lack of 'off-the-shelf' systems. The unavailability of 'off-the-shelf' systems could be attributed to the unique operations that differentiated F3 from the rest of the conventional banks, on one hand, and, on the other, the lack of standardised operations amongst the Islamic banks.

The bank depended on its internal resources to develop its business applications as well as any conversion tools to migrate or interface the different hardware and software systems with each other.

Relationship with vendor:

The bank perceived its relationship with Wang as a threat to its future IT strategies. Wang was going through financial difficulties and its future prospects were gloomy. The bank decided, therefore, to terminate its relationship with Wang.

The bank then evaluated some alternative scenarios: to seek support from other well established vendors such as IBM, or to go to an open system platform which supports different hardware environments. The bank opted for the second solution.

Selecting IBM as a substitute vendor for Wang was a solution that it evaluated. But since neither IBM nor any other vendors were able to provide an "Islamic banking" application system solution, the vendor's relationship with the Islamic bank was not perceived as strategic. Indeed, it was concerned that such a relationship with the vendor could change into a threatening one, such as that with Wang, should any problems occur.

The bank decided, therefore, that since it was depending on its internal resources for developing all of its systems' needs, the most rational solution was to build its IT systems and applications around an open system environment. This opened up a new business prospect for the bank, as will be discussed later:

> "..because we were using Wang, but we felt that Wang was facing a financial difficulties. We put the question of what will happen if the company faces liquidation. What would happen to me. Am I going to die? What if I needed parts for my machine? Then we put options, one of the options was to move to another environment, IBM for example. Another option which all of us were happy and in favour of was to go for an open system concept and use any hardware you can use. My system is designed to accept any machine. We spent millions on it. We felt that to do it this way is once, and it is for ever investment. At least today I can sleep nicely. If Wang is dying, NCR is dying, no problem. I can change. Tomorrow, I can get another machine and it starts working without hindering my operations, and my future progress..." Senior Vice President.

New line of business with excess IT capabilities:

The bank created a new subsidiary company, which marketed system applications and other IT related supporting services. The creation of this company came as a result of the bank's investment in the internal development of its application systems and due to its commitment to the open system platform that enabled its application systems to run on different hardware platforms.

The excess resources in expertise as well as application systems enabled the bank to change the status of its IT department from a cost centre to a profit centre, selling its IT services to the market.

The bank's decision to create a systems company was not envisaged when the bank started investing in developing its own systems and migrating to the open platform. However, its strategy of entering the IT services business came about as a result of its success in developing its internal systems from scratch.

The informants perceived that there was a niche in the market that needed IT support that was not available from other IT vendors. They believed that there was a good market opportunity for their subsidiary company, as more conventional banks, such as Citibank, and other newly formed Islamic banks, were entering the Islamic banking business. For these banks, buying 'off-the-shelf' packages with after sales support was envisaged by F3 as being more attractive than developing in-house systems.

It is worth mentioning that sharing the bank's IT systems with others, rather than restricting their use to only inside the bank, was the source of a new business scope for F3.

".. we have to count on our experience and develop our own software, this software is very strategic for us. In fact we have started creating an information technology company as a subsidiary of the bank that will market this product to another institutions.. I would consider that to be a very strategic achievement and a very strategic instrument that we developed in house..". EVP.

"... many of the banks expressed interest in buying {our system}. Why? Because our systems are fully integrated, on-line, real time, and operate according to the "Sharia" requirements. These three requirements are not available with the outside systems. There are systems that are available outside. There are people who may offer such systems but they are not fully integrated. We are the only bank with a full integrated, complete Islamic banking system...".

".. while we were developing that {the banks' new IT systems} we were enhancing our EDP department... We can sell our systems to outsiders. We can generate additional income. This was not envisaged, absolutely, because that was a service department. But now we felt that IT is becoming gradually a revenue centre, because we can sell that system, we can earn something..." Senior Vice President.

Role of the IT manager:

The IT manager played an informative role to the bank with regard to issues related to changes within the technical environment outside the bank, and the changes that were needed to be made within the bank:

".. Our job in addition to running the IT department is also to certain extent to update the management.. of what is happening in the market.."

"..we have to go to them and update them of what is the future perspective of future computing, the open system platform, the networking and so on. And based on our input to them, because they are not technical people, they rely on our input for that decision making so in order to make sure that we get the best decision from them we have to update them very thoroughly of what is happening in the market.."

IT strategies that were related to the bank's IT infrastructure such as what system to adopt and what other supporting programs needed to be developed were directed by the IT manager. Despite this, his strategies still needed the approval of top management.

He was also responsible for setting the bank's IT strategies based on its business strategies. As mentioned earlier, these strategies were reviewed by an IT steering committee.

As for the business goals, his role was supportive rather than directive. He was not invited to all of the bank's business steering committees. He was asked to participate only in those meetings where IT support had to be discussed.

Relationship between business strategies and IT strategies:

The formulation of the bank's corporate strategies was done within a steering committee in which the bank's CEO and division heads participated. The IT manager participated in these committees on invitation, whenever there was an issue related to IT.

The informants said that the business strategies capitalised on the IT strategies and not the other way around. Change in the bank's infrastructure was driven by the bank's expansion strategies, as mentioned earlier:

> ".. our old system was based on the concept of wholesale business. Providing wholesale services. we decided couple years ago that we want to provide different kind of services to our retail banking. This {led to} a complete change to our systems and a complete rethinking. It was not envisaged before. But we changed it now. Now IT has to serve that {strategy}. This has affected the whole, even the system structure has changed. The number of staff has increased, their future developments has changed, the whole thing has changed up side down. Why? Because there is a change in the business strategy... set the IT strategy to help us achieving the goals of the business and not the other way around. The business goals will dictate the terms of the system strategies."

The IT manager added that due to the IT support, the bank was able to sustain its position within the niche that it had selected to operate from. For example, its IT gave the bank support to its retail position in Pakistan. It was the first bank there to introduce on-line ATMs. Moreover, IT was used to support the bank's Islamic products, and hence support the bank's presence within the Islamic banking niche:

> ".. You seldom see Islamic syndication... Islamic syndications are new products and it needs automation and support as well. Now since we created automated support for that, our business people were able with the backing of that support to go to the market and create a niche for Islamic syndication. We were pioneers in that...".

Change in culture:

In my meeting with the CEO, he wanted to portray the bank as having a culture that appreciated the role of IT, and as being no less competent than other conventional competitor banks in capitalising on IT. He publicised the bank's success in the development and marketing of the Islamic banking system and the creation of an IT services subsidiary company. On the notice boards in the bank, I observed clippings showing the CEO meeting with the local newspapers, in which he proudly announced the launch of their new system and the creation of the IT company. As mentioned earlier. the metaphor that he used to describe the relationship between the bank's strategies and IT was "the Catholic marriage".

I observed that three of the top management informants that I interviewed held foreign banking experience. The fourth was educated about, and exposed to trends in banking in the UK. Such background experience on the part of the informants may have played a role in their adopting ideas and practices characterising the foreign banks' practices.

Three of the informants came to the bank between 1986 and 1988, the period during which the bank changed its strategies and top management team composition.

As mentioned earlier, until 1987, the bank was a small offshore bank. However, after 1987, the bank adopted expansionary strategies in business and geographical markets. This change in strategies was accompanied by a change within the bank's IT scene both at the conceptual level, pertaining to the role of IT, and at the concrete level, pertaining to how the IT scene was organised and the type of systems used.

At the conceptual level, the bank used to perceive IT as having a narrow and marginal role, which was only related to some operational processes such as generating some reports or automating a billing system, for example. Now this role has changed, and top management perceive an intimate link between the role of IT and the bank's business strategies, its ability to compete with the competitors, its survival, and its level of customer services. This change in the conceptual level was associated with support from the board and the top management levels.

> "..{Now} IT plays a major role in achieving the objectives of the enterprise. IT is a very important mean without it I can't achieve my objectives..
>
> "Within [Foreign Bank Three], we are highly automation oriented because our feeling within the management.. that today banking could not efficiently survive and service customers without an efficient automation support." Senior Vice President- credit management.
>
> "..the force that will push us is the competition.. we are niche oriented because we {are} specialised, and you always have to protect that niche, you have to be innovative. You have to be able to give alternatives... you have to improvise and by improvising you put pressure on your IT.." EVP

Previously the cost of the system had hindered the bank in adopting IT. However, with the change in culture, cost was not the main criterion upon which the bank decided its IT strategies. The transformation from the old infrastructure to the new infrastructure was

driven by the strategic goals of the bank, which were difficult to quantify, rather than the cost of the project, which was very high if the strategic factors are not considered:

> ".. it was a very questionable event at the beginning, and the cost factor was very much on the high but we valued that IT is the way of the future.. we may have a stronger view for the value of IT, and we have put in our money where our mouth is, more than our competitors who are in the same line of business..}.

At the concrete level, the bank changed its IT organisation. Before 1988, there was an EDP section within the operations department. Heading the EDP section was a supervisor who reported to the operations manager. The EDP supervisor received his orders, which were operational in nature, from the operations manager. With the change in culture, this small section changed into an independent IT department, and from a cost centre into a revenue centre for the bank. The head of the IT department's status changed from a supervisor headed by the operations manager to a Senior Vice President reporting directly to the CEO:

> ".. At that time I remember the person who was heading the EDP was not a very senior. Even in the reporting lines, the EDP was reporting to the operations manager. The operations manager was always looking at the operations point of view. So it was a wrong concept of looking at the technology.

> .. a major transform, an overhauling one started from the reporting. Our reporting lines are different. We have a much higher value. Supported by senior vice president levels. Before it was by junior supervisors to managers level reporting lines.. we have given them a kind of independence.

> .. I joined at the beginning of 1988. I had the opportunity to work with different people at the head level. I remember at those days the EDP used to be small. You have two or three people.. the main deficiency was the appreciation to the IT it was not as important as today. Before they looked at it as a small service department... Ahh.. design a system for billing for example.. before you had no say. Just do this and he ought to do it without thinking why. Now the mentality has changed.

As mentioned earlier, there was a change in the type and function of the systems that the bank adopted.

The bank's staff changed the way they performed their daily operations. They became more closely linked to the application systems and used them in their daily operations. The need for secretaries, for example, was perceived to be less important as the managers preferred to carry out their daily operations by themselves by using the PC tools.

Another factor that marked a change in the bank's culture, was the bank's new recruitment policies that stipulated that new recruits should be computer literate in order to be able to cope in the bank's environment.

Enablers of IT strategy:

The following are the enabling factors of the successful exploitation of IT within the bank as perceived by the IT manager and the Senior Vice President.

- Top management appreciation of, and support for the role of IT.

> ".. you have the top management appreciation to the concept of IT. Real appreciation to what it is..
>
> .. we recognised the importance of IT policy, IT benefits in general, years ago from the outset. This is due to the knowledge of our top management. We have open vision about that. We have management appreciation and management support for the change and development.."

As mentioned earlier, the bank evaluated its IT strategies based on the strategic opportunities open to them rather than the cost of the system, which was huge at the migration phase.

- Bank participation in the development and implementation of the strategy.

As mentioned earlier, the Senior Vice President participated in the development of the bank's core system in addition to staff from the different functional areas. Those participated in the ad hoc committee that was responsible for developing the system.

> ".. they did a remarkable job. This does not go to the EDP only, but it goes to the bank as a whole. Because everybody participated in the development of these systems.."

- Competence of the IT department and leadership of the IT manager:

The bank provided support to the IT department. As mentioned earlier, there were changes in the rank of the IT manager, in that he was promoted to Senior Vice President. There was also a change in the reporting lines to empower the IT department to play an active role. Moreover, the IT department was given more power to recruit employees of the required calibre. Budgets for training were allocated to enable the division to achieve its targets.

> ".. our strategy is to have our technology processing and development independent {from other organisations}. How to achieve that? It can't be achieved unless you have a complete department strong and well supported to enable you to achieve that objective..
>
> ".. we have set up a specialised IT division headed by a senior vice president level. This is just to show you how important it is..
>
> .. we have to have a [high] calibre staff. Continuous training on the job or outside. Training is very important to gain new knowledge... a dollar spent on training will give a better return than any dollar spent elsewhere..
>
> ... top management appreciation, and management support. They {IT division} get what they need. Staff, training,... and co-operation with the other department. For example if I want to upset the program of the EDP, I can stop them. The role of the management here comes to achieve coherence between the different departments.. this can't be achieved unless the management appreciate the value of that..."

The leadership of the IT manager was crucial for the bank's successful migration from the old system to the new system. His role as informant to the management directed the

bank's future IT infrastructure, and was behind their ability to market its application systems that were designed for an open platform environment.

- Existence of clear goals and objectives and maturity of the Islamic banking products:

The informant said that there were no clear strategies for the IT scene in the past. This situation had changed, the EVP argued:

> ".. we sat on an ad hoc committee to review where we stand and to review our information technology within the organisation... we realised that we did not have clear strategy six years ago. We put it into place and we reviewed it again and again. Now it stands solid and contributes a lot to the success of this institution.."

Moreover, the IT manager said that the nature of Islamic banking 10 years ago was still evolving, and its characteristics were not well defined as compared with the conventional banks. Ambiguity in the processes hindered the successful development of systems in the past. However, after the bank had been in the field for long enough, its business as an Islamic bank became more mature and better defined, which enabled the IT support unit to successfully assist the bank's products and operations.

- Change in the perception about IT:

Changes in the perception of, and appreciation for, the business implications of IT were other enablers of the strategic use of IT within the bank. The Senior Vice President narrated a story about another bank that adopted similar strategies to theirs, but failed to capitalise on its IT systems. By narrating this story, he wanted to emphasis the bank's appreciation for the business implications of the role of IT.

> ".. one of the banks, without quoting them, felt that IT in today's life is merely a small service department. That bank expanded. They reached a stage where all their expansion programs were jeopardised. They could not advance because there were no clear policies, no support. When they came to analyse what kind of system they have and how they operate, they realised that what they

are doing is absolutely not comparable to their requirements... we recognise the importance of IT policy, IT benefits in general.."

".. IT is not EDP only, it is much wider. It include IT as a whole. IT is not just processing as the old approach to it, it is not. We recognised that one..."

Problems:

There were three main concerns for the IT manager.

Acquiring the right expertise in the market was a concern to the bank since it depended on its IT department to develop the internal system solutions,. There were a limited number of IT specialists who could meet the requirements of a specialised bank such as F3.

The work load on the IT department was a second concern for the bank. As mentioned earlier, the bank was responsible for fulfilling its own IT needs, in addition to those of the other institutions belonging to the group. According to the IT manager, some of the departments within the bank would have to wait longer before they could meet their requirements.

The third issue was following the pace of change within the IT technology. The IT manager said that this issue was not an immediate threat to the bank as long as the current systems were meeting the bank's business needs:

".. Hardware is continuously changing. From an organisation point of view, you can't change with the change in the hardware in the market because of the fact that organisations have certain amount of investments in their hardware and they want to utilise this investments before they move on. I think the critical issue here is to ascertain that is the existing hardware and software strategy serving the business needs of the organisation, if the answer is yes, then there is no immediate need for change...".

Foreign Bank Four (F4)

Introduction:

Foreign Bank Four (F4) was an international bank, which operated a large branch network in more than 60 countries.

I met three informants, the bank's local CEO, the IT manager, and a senior manager. The case study is based mainly on my interviews with the CEO and the IT manager, while a senior manager provided me with background information about the bank. All the interviews were tape recorded.

Business Focus:

The banking environment - a market of "lemmings":

The CEO perceived the Bahraini banking environment as being crowded and over-banked. Moreover, the market was not highly sophisticated, offering only limited lending opportunities for the competing banks that were highly liquid.

The banks had been mimicking each other in terms of their business approaches and the services that they provided. The CEO described their behaviour in the market as a "..

'lemming' .. that jumps over cliffs and kills itself.. One goes in one direction, normally we will rush after them .. One gets competitive advantage.. next year everybody else has caught up with you..". For example, Foreign Bank Four was one of the very first banks to enter the personal loan business. When the bank started approaching this segment of the market there were very few banks interested in this type of business; however, the majority of the banks followed thereafter.

The foreign banks, according to the CEO, were searching for niches in the market that they could best serve, as opposed the mass market that the local banks had more advantage in serving well. Due to the tightly regulated banking industry in Bahrain, the foreign banks were restricted to opening not more than five branches. This restriction had given the local banks a competitive advantage over the foreign banks.

The CEO believed that quality of business, as opposed to quantity, was their target. As will be discussed in the coming section, the CEO believed that focusing on high worth individuals with whom the bank had long term relationships, rather than the mass market, was the target that they wanted to build their strategies around. The CEO believed that Bahrain was like Japan in terms of how the business was structured. There were a few big, wealthy families who had well diversified networks of businesses, and owned major shares of the commercial business. This was the targeted segment for the bank, as will be discussed later.

The above summarises the perceptions of the top management about the banking environment in Bahrain. The coming section describes the segments the bank focused on, as described by the informants.

Market niches:

The bank operated within the following areas: corporate, commercial, personal, and treasury (see Figure 1). The corporate business segment consisted of the big corporations in Bahrain such as Gulf Air, Aluminium Bahrain, Caltex, and Bahrain Petroleum Company.

Figure 1: Business focus (F4)

The commercial business was divided into three main segments. The bank focused on serving the big, well-established wealthy families who had a presence ".. at all levels of industry..". The bank had the advantage of already having long-term relationships within this segment.

The second segment of the commercial business included the families that had developed their business during the boom period, while the third segment was small businesses.

The bank was involved in trade financing the above segments. The bank's large branch network of branches in over 60 countries gave it a competitive advantage over the local banks, which were limited in their international presence:

> ".. we have been here in Bahrain for a long time, and we have a very good connection, and our aim is to build on that.. we have a good world-wide network,. we have branches wherever you go, you as a consumer it is much faster and cheaper to deal with us than going to another local bank that has limited branches.. the beauty of international banks is that you have a world-wide network.. the advantage that we have if we deal with an international network is efficiency, the speed of service and the cost effect.. because if we deal with our own branch in America or the UK or the Far East... if I want to deal with an agent bank, the time consumed there is more than

that I need to deal with my branch.. this is the advantage to your customers.. if I want to open an L.C. {letter of credit} and I go to a third bank where I have to pay their commission and I have to follow their rules and timing, the time is much longer than dealing with your branch..." Senior Manager.

The third area of business focused on by F4 was personal banking. The bank segmented this business based on nationality, income, and occupation into a matrix of sub-segments with different credit ratings assigned to each. F4 was one of the first banks that had widened its business focus, from serving the commercial segments to financing the personal market segments.

The fourth type of business for the bank was treasury businesses, in which there were only limited opportunities as there were few inter-bank dealings in Bahrain. This area of business was, as the CEO described it, a ".. support service to the other areas..". Within this business area the bank mainly focused on deposits.

The CEO stated that the philosophy of the bank was to seek quality of business as opposed to quantity. He believed that seeking a wider market share would be at the expense of quality of business, which they would have to forego if they entered into a cut throat type of competition. He did not want to enter into head to head competition with the local banks. He believed that serving the well established wealthy segment would be more rewarding than chasing the mass market segments since that required a larger local branch network and higher operating costs, capabilities that his bank did not have:

".. if you are going for market share then.. two things that normally get thrown out.. pricing and credit quality, because you can't go for credit quality and market share..

.. domestically, all the banks are chasing after a very small pie. Banks over the last few years tended, at least the international ones, tended to look at quality of lending as oppose to quantity..

.. in this environment, the private customer is not the driver of the business, the driver in the banking system are Kanoos, the Fakroos, the Jalals, the Yaleems [the rich families].." CEO.

The CEO perceived the bank as not being the largest player in the market nor the leader:

".. we are not the largest player.. nor the leading players in the market.. and so therefore when we have a strategy, we keep our eyes open on what they are going to do.."

Business strategies:

The bank's business strategies were short-term in nature, and were influenced by the group's overall guidelines, as will be discussed later. However, there were pre-defined business areas that the bank operated in for long periods of time.

The CEO did not believe in setting long term detailed strategies for the bank's business:

".. because you don't have a strategy for the whole bank.. we are not the largest player.. not the leading players on the market.. and so therefore when we have a strategy, we keep our eyes open on what they are going to do.. and really if you said if you have a fixed strategy, the answer is no.. we have a horizon, and let say that my horizon is the end of December 1995, I know roughly where I want to be at that time, and I know roughly how to get to where I want to be.. but the path I take literally has to be looked at every two months or every three months.. because strategic horizon these days is not more than six months ahead.. let forget two or three year plans, that's for communist planning, and that never worked.."

The bank had broad guidelines and goals set by the headquarters, on which the Bahrain branch acted to set their local strategies. The headquarters evaluated the attractiveness of Bahrain business environment as a whole. This evaluation was influenced by the stability within the Gulf area. Based on that, they set the guidelines for the branch in Bahrain:

".. What can affect Bahrain, Saddam Hussain moves a division to the border with Kuwait.. capital flight .. Iran comes into a conflict with the US navy for some thing and other flash point.. there are so many factors that could affect Bahrain that you can't look so far forward..

..there are many influences on strategy. One would be external drivers for strategy... the bank is globally deciding that some businesses are strategic and some business are not strategic.. now

some businesses are regarded as core businesses.. personal banking is core, trade finance is core. treasury is core, corporate banking is core, but within each one of those areas, as I said before. you have different segments.. so while I say that treasury is core you might find that treasury deposit taking activity in Bahrain is core to our requirements, while interbank trading is not.. so that is the external driver.. what we then do is take the external drivers and apply those external drivers in terms of the local economy, the local business which exists in Bahrain.."

When asked about whether the rest of the banks in Bahrain exercise strategic planning. the CEO stated that there were key players who were strategically planning in Bahrain. He mentioned the two main local banks. However, he differentiated them from the foreign banks such as his own in their approach to strategic planning. The foreign banks' strategic plans considered investment prospects of Bahrain first and within these guidelines they sought opportunities:

".. I think their [talking about another foreign bank] exercise is a broad based exercise which like ours would not look at business first of all but would look at Bahrain first of all, and you determine in terms of country risk whether you wish to continue investing.. if you decide that you have a threshold level of country risk .. you say yes fine where are the opportunities within that country risk for me to invest.."

As for other banks in Bahrain, the CEO believed that they did not have strategic plans.

The time horizon that the CEO mentioned for their strategic plans was between 3 months and one year. These plans were continuously revised and evaluated by committees that comprised the CEO and the heads of concerned business units.

Perceived role of IT:

No competitive advantage from the bank's IT systems:

The CEO believed that their current IT systems did not give them a competitive advantage over their rivals. As will be discussed later, their main computing system was outmoded and suffered from efficiency problems. Moreover, the bank was committed to the centralised development strategy that its group followed, and therefore did not have autonomy to react to match the competitors within the local market:

> ".. in terms of do our systems currently provide us with a competitive advantage, we have to say no they don't.. they don't in terms of our existing systems because we are not a stand alone bank.. we are a global bank, therefore we have to develop a global system.." CEO.

A quantum leap in service delivery:

A migration to a new system, however, was expected to enable the bank to "make a quantum leap" in service delivery.

ATMs to drive away the low income customers from the counter:

As mentioned earlier, the bank, was in the first wave of banks that installed ATMs in Bahrain. The CEO perceived its clients in a similar way to those of the airlines. The first class customers, those high worth clients that the bank perceived as making the quality business for the bank, received high quality personal attention from the bank. Next came the second class clients, those that the bank served at the counter, and last

came the third class clients, those who deposit their salary at the end of the month and have withdrawn almost all of it by the beginning of the next month. The ATMs were put in to drive this lowest class of clients away from the bank counters and so release the bank employees from serving them, in order to serve the more strategic clients:

> ".. A lot of banks are looking at their customers the same as the air lines are looking at them.. a first class, business class, and economy. First class will get priority banking services, business class will get counter service, and the economy class will get a plastic ticket and they will be told to go to a machine..

> Saving accounts that have a credit of 300 Dinars a month.. 270 Dinars are immediately sent to India.. and the chap lives on 30 or 45 Dinars, he is not going to get counter service from any bank in town.." CEO.

Improving the internal systems - a strategic approach:

The CEO argued that the expectations within the Bahraini market were not as high as those of the west, and therefore directing the IT to the public was not a strategic option:

> ".. for your people in Bahrain, lets say no most of them don't need it at the moment, it is like saying are you going to give star war technology to Sudan.. no.. what are they going to do with it. They don't need it. If you look at the level of expectations and the level of need in Bahrain it is still comparatively low level to the west.."

The strategic role of IT, as the CEO perceived, came from using IT within the boundaries of the bank rather than beyond it to the public. The CEO avoided approaching the mass market, as he believed that due to their limited branch network, they were not able to pursue this type of strategy. However, he believed that IT could play a strategic role in the bank through enabling it to control its cost though enhancing their internal system efficiency:

> ".. it will give you competitive advantage but perhaps not to the.. public. where it will give you competitive advantage is in your own internal systems where you cut cost.."

> ".. but here.. lets assume that we had 50000 customers. Now for Bahrain with a market of

500,000 people to go to a 10,000 customers, takes our growth from 10 to 20% in an environment of an intense competition.. so it is hardly likely that it is going to happen so therefore, our visionary requirements for IT are not going to be there to support {growth}, they are going to be there to deliver products, cheaper, more efficiently..". CEO.

Information technology was expected to control the effects of the increase in transaction volume. The CEO argued that if the bank managed to control its cost through enhancing its efficiency by using IT, then in the long run it would enjoy a competitive advantage over the others:

".. we will be using IT primarily to drive down cost. But this is not a short term gain, this is a long term gain... you can put as much computers as you want, it is not the computer that cost, it is the software that cost us money.. and putting this system in does not give you the dramatic savings, what is does, it nullifies the effect of cost increases, it means you could do more at today's price and if you can do that in five years, then in years one through five you will have a competitive advantage.." CEO.

Efficient and cheaper delivery of products:

As mentioned earlier, one strategic area where the bank perceived a role for IT was to deliver its products more cheaply:

".. if you take product delivery then obviously it has a profit and loss connotation, because you have cost in terms of product delivery. IT reduces that cost."

".. I would say first of all it would be an improved support for front end products.. improved delivery to these products with view of minimising cost of delivery.."

".. On our last major project that we did.. it was cost.. cost was the driver of last strategy.. cost and quality delivery.. those were the two main drivers.. The last big project that we did was a trade finance ... a centralised system and it covered every thing to do with trade finance... excellent MIS capabilities to the system.. very easy to operate ... totally modular.."

IT supports business goals:

The informants perceived IT as a means of supporting their business goals. The trade finance system that the CEO mentioned earlier, and the personal loans system, which

was developed in a PC environment (to be discussed later), were examples of systems that were driven by the bank's business goals. As mentioned earlier, the bank focused on serving the commercial segments through trade financing, and the personal segment through credit financing. Both of these systems supported these businesses.

> ".. The basic concept here is business driving IT.. in terms of IT supporting business, it is becoming integral part now.. as you are aware we are into this information technology age, if you want to deliver products faster into the market, technology has to play a role, and to that extent we always support the business in insuring that such products are feasible and to make sure that all routine course and any thing that is repetitive is performed through our systems.." IT manager.

> ".. we have a procedure within the bank... that IT is driven by the business... so IT developments is generally sponsored by the business itself.." CEO

Strategic MIS:

The CEO perceived MIS as strategic to the bank's business. He expected it to enable his bank to pursue its strategy focus of chasing "quality" businesses. Moreover, the CEO stressed the important role that their MIS would play in managing their balance sheet.

The IT manager said that the systems that they implemented in the PC environment enabled them to manage their provisions and keep them as low as possible.

> ".. one of the largest areas of advantage that we are obtaining from IT is proper management of our business. A clear analysis of segmental profit, segmental cost, a clear analysis of margins, we are able to determine which sectors of our business we should exit from, which sector we should increase.." CEO.

Crucial for meeting central banks' reporting standards:

The bank was under the supervision of the central bank in its home country as well as

other central banks in countries where they had had branches. In Bahrain, the bank was under the supervision of the Bahrain Monetary Agency (BMA). The BMA follows the standards of the Bank of England to a great extent, and it is keen to adopt any new policies while maintaining a reputable and stable banking industry.

The CEO perceived that reliable and efficient internal systems were crucial to gain the trust of the central banks wherever the bank operated. The CEO mentioned that they were linked through an E-mail system, which enabled them to consolidate their financial position in a speedy manner and thus meet the central banks' requirements:

> ".. After the BCCI scandal, the banking is becoming a more regulated industry, the central banking authorities require more and more information. The only way that you can provide it... is through systems .. our primary control is the [named his home country central bank] which monitor the bankers on a global bases, our secondary primary control would be BMA which monitors the health of our Bahrain segment in Bahrain, as all central banks, they will see ideas occurring in other 'centrals' and they will need to extend them to Bahrain. The only way we can cope with that is through the management of that information technology through the development of management reporting that we have, it is vital.."

Five day week and the big banks' delivery systems:

The IT manager argued that the introduction of the competitors' phone banking systems did not have any influence on the bank's business. Moreover, he did not perceive any strategic role for phone banking systems.

The CEO narrated a story about the tension that was increasing between the foreign banks (especially his), and the big local banks. The conflict was about decreasing the working days of the week to five days instead of six. The CEO objected strongly because he perceived this approach as harming their business, which was not directed at the mass consumer market, but at the big merchants, whom he would not be able to

serve well as a result of the decrease in the number of working days.

The CEO perceived this proposal by the local banks as a move to force the mass market to utilise their phone banking systems more and hence gain a competitive advantage over the banks who did not have the system. The conflict had not been resolved at the time I was conducting this field work.

Despite the IT manager's claim that the rivals' phone banking systems were not affecting their business, elsewhere during the interview he mentioned that the reason they had not introduced it was because of the deficiency in the bank's old infrastructure. However, they were planning to introduce the telephone banking system after installing their new computing platform, which was capable of supporting the phone banking system.

This story shows how the banks were manoeuvring to get a competitive advantage through using their IT systems.

The following is part of the quotation by the CEO about the conflict over the five-day working week and how the conflict was related to IT systems and market segments:

> ".. [the two main local banks] are pushing six days production into five in the normal hours. Yes but there is a cost advantage.. are you planning to get rid of staff? Are you planning to reduce cost? Are you pushing more into the systems? And was that the true advantage? Or these two banks feel that with their systems they can gain competitive advantage over the other banks by forcing customers to depend more and more on telephone banking and ATMs and as a result of that the customers will move to these banks which provided the best services. They miscalculated, they forgot that in this environment the private customer is not the driver of the business, the driver in the banking systems are the Kanoos, the Fakroos,... these people are merchants and when it comes to being a very rich and influential merchants and you see a five day week .. coming through which may cause a significant cost to your trading business.."

Main IT developments:

The bank was amongst the first wave of banks that introduced ATMs. These ATMs were interlinked within the region.

A second important historical project that the bank developed was linking the bank's branches in Bahrain electronically. Now any client can bank from any branch without the need to refer to his branch. Nonetheless, the senior manager said that the bank's systems were not full integrated.

A major IT project that the bank was instituting was transforming from their old NCR computing system to IBM AS 400. The bank's old system was outmoded, had deficiency problems and was not able to support other systems.

The lack of support from the bank's regional office for the main system necessitated finding other means of supporting its consumer finance division (CFD) and its business which was unique to Bahrain. The bank opted for developing its consumer finance system on a PC environment that was connected via a LAN.

The transformation to the AS 400 enabled the bank to adopt an imaging system that aided the bank in storing and retrieving documents. Its adoption was encouraged because of a decrease in its price.

According to the IT manager, the systems that the bank developed for the retail business outnumbered those developed to support other areas of the bank. The bank was in the

process of increasing the number of its ATMs, and introducing credit cards. As mentioned earlier, the bank did not have phone banking system as its old computing platform was not capable of supporting it. To support their trade finance business, the bank adopted a system that aimed at cutting down cost and improving delivery. In addition to the above, the bank was considering automation of the front office.

Reason for embarking on the above systems:

The drivers for adopting the above systems were interrelated with the perceived role that IT played as already been discussed. IT played a role in improving internal efficiency and controlling cost, delivering products, facilitating better decision making, meeting the reporting standards of the regulatory bodies, driving away the less strategic clients from the counters to the ATMs, and enabling the bank to survive. However, the decision to embark on these systems was not taken by the bank's branch in Bahrain. The main drivers of the bank's IT strategies are discussed below.

Follow the regional office IT strategies:

The bank acquired its main IT strategies and major developments from its regional office which, in turn, followed the headquarters' grand strategies. These strategies aimed at standardising the systems. As will be discussed later, this policy failed in some cases to address the unique needs of the different markets.

Support the bank's unique business needs:

The bank had to develop some of its systems in a PC environment to support the operational needs of its business goals. The grand-centralised IT strategies did not address these needs and the branch in Bahrain had to depend on its internal resources to develop small systems that were isolated from the main system.

To overcome the deficiency of the current computing system:

The bank's NCR system was outmoded and it failed to support the bank's business requirements. To use the IT manager's words:

> ".. it is very difficult because as I told you it is very difficult to determine how much more customers or revenue you will generate by telephone banking, so may be that is one of the main reasons why we have not gone for it. Secondly in terms with interfacing with our existing systems because the systems are so obsolete and quite old in their concept and trying to interface with them may be a problem... we just upgraded our systems now and probably we may look at it in the near future.."

The above quotation may describe why the bank had not embarked on introducing a telephone banking system even though it was the trend amongst the banks in Bahrain. Contained within the above quotation were two main reasons. The first will be discussed when I talk about the bank's culture. The second reason was related to the inability of the main system to support telephone banking. There were also other systems with business implications which the main system was unable to support. The customer finance system, which was developed in a PC environment, was an example. The deficiency of the bank's computing platform was a driver for migrating from the NCR to the IBM AS400.

Follow the market trend:

The bank's intention to introduce credit cards was a reaction to their competitors. The main players in the Bahraini market introduced Visa and MasterCard credit cards. Some competitors provided cards regardless of whether the client held an account with their bank or not. The majority, however, stipulated that the card holder should have an account with the bank.

Formulation of IT strategies:

Group IT strategies were initiated at the bank's headquarters in Europe, and then filtered through the regional offices to the bank's branches in these regions. The bank aimed at standardising and centralising the development of its systems to achieve economies of scale and control related costs
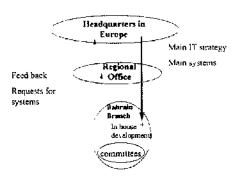
Figure 2: formulation of IT strategies at F4

(see Figure 2). There were a number of problems associated with this approach, however.

Firstly, the systems needed customisation to be adapted to local environment requirements. Secondly, the centralised approach meant that the bank's responsiveness to local needs was slow. The CEO, for example, believed that their system did not give them a competitive advantage over the other banks because they were not a stand-alone

bank but a member branch of a group and had to fit within the overall strategy of this group:

> ".. in terms of do our systems currently provide us with a competitive advantage, we have to say no they don't.. they don't in terms of our existing systems because we are not a stand alone bank.. we are a global bank, therefore we have to develop a global system.." CEO

The IT manager added that, due to the centralised process, the group was slow in responding to the need to customise the bank's global system to local requirements.

Thirdly, there were local business needs that were unique to Bahrain (e.g. the customer finance business), which the global strategy did not fulfil. The bank had to depend on its internal resources to meet these unique requirements:

> ".. customer finance is a classic case.. and we developed our own thing.. because there was no group product available.. however we can't stand by the sidelines and wait until the group develop such product.."

The bank had recently decentralised decisions related to IT from its headquarters to its regional offices. The bank in Bahrain had some autonomy with regard to standalone and minor systems, which did not exceed certain approved investment levels. Other major systems that the bank needed were the responsibility of the regional office. The IT manager played a crucial role in regard to this. He had two reporting lines: one to the bank's CEO in Bahrain and the other to the regional office. Approval from the regional office was needed for any local developments. The regional office evaluated whether or not there was a regional interest in the project. If there was a regional interest, then the regional office would own the project and develop the system; otherwise the Bahrain branch would develop that system.

The IT manager participated in business committees by invitation. He was invited whenever there was an issue related to his area.

The process of defining the required support of IT to business starts within the business areas, to quote the IT manager:

> ".. product profiles are drawn, viability is done, functional aspects are drawn out.. to develop whether the product itself is viable or not. But once they reach a conclusion and say we must market this product, or get into this kind of business, they come into IT and I do the costing on the IT side, trying to make compatible systems and help the business.."

The IT manager's contribution came after the business requirements had been defined. However, when it came to defining the infrastructure requirements of the bank, it was the IT manager's contribution and insights that directed the IT strategy within the bank in Bahrain.

The IT manager also played a consultancy role within the bank. He proposed new ways in which the IT systems could help the business improve efficiency. The local IT strategy within the bank was concerned with proposing and defining the business implications of the IT systems, which the business people could then use:

> ".. there are times where I may have more input to offer to them, so it starts the other way around. Like 'self service terminals' for example. It is an IT driven project in the sense that what is capable of doing, the technology itself has something that has to be brought out to the business man's thinking. I have got to tell him of what it is capable of delivering .. and since I have the business background, I can probably suggest ways of incorporating certain products into this. Like for example credit scoring, now self service terminals and credit scoring go hand in hand. if I can link up the two..". IT manager.

All local IT developments were managed through a committee called the Product Management Committee (PMC). According to the CEO, "the Product Management Committee runs the project, budget for it, watches the quality milestones..". Representatives from

the business units and the IT unit sat on the PMC committee. After the project had been developed, the acceptance of the project owner was essential.

As part of their services, the IT department had a process that they called "service quality management" to measure and promote the quality of services delivered by the IT department.

The ownership of the IT initiatives depended on the type of IT project. The business units owned the project and were held responsible for paying for it, if it was related to their areas. When the project was of a technical infrastructure nature, the initiator would be the IT manager and if the project affected the entire infrastructure, the CEO took the responsibility.

Time horizon for the centralised IT strategies:

For a bank of global operations, initiating and developing a global IT strategy requires long range planning. For example, it took the bank five years to implement one of its global systems. Their goals were based upon their past experience and their future expectations:

> "Q. What is the time horizon of the strategic plans?
>
> CEO: anywhere between one and five years depending on what the business is. Actual strategic planing is probably up to twelve months ahead, however, in IT you can't plan 12 months ahead you have to plan probably 3, 4, 5 years ahead and so.. I would say that IT involvement is a series of a rolling waves.... the big waves that are coming in the distance, the big ones are your IT strategies that were started maybe four years ago. For example, we have a single system that covers Singapore, Hong Kong, Malaysia, the personal banking system.. which has been developed by IBM.. that is an ongoing development... but [the system] has been developed now for close to five years. And that is the sort of strategic vision that you have to take when you develop a new system.." CEO.

Based on the above quotation, directing the bank's global IT strategies resembled directing big oil tankers: Decisions had to be taken a long time before a change in direction could take place.

Relationship with vendors:

The main investment decisions about IT systems were taken at the headquarters and regional offices. Similarly, all relationships with vendors supplying major IT systems to the bank were held at the headquarters level.

The bank discontinued its relationship with NCR, migrating to IBM and installing its AS 400. As the CEO mentioned, IBM, also developed some of the bank's major systems. The relationship with IBM was, therefore, in both the hardware and software areas.

Role of the IT manager:

The IT manager said that he had had a hybrid background. He was an accountant who had taken a conversion course in IT. After that he had worked in different countries as a systems analyst before joining Bahrain. His background had provided him with the ability to understand the business and the IT scenes well. His role is summarised below:
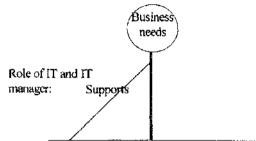
- His hybrid background enabled him to bridge the communication gap that usually exists between the users and the technical staff.

- He played a technical role. He was responsible for the systems' operations, maintenance and quality of service.

- He also played an informative role. He considered himself as an internal consultant informing the users about new ways of operating with the IT systems that they had. and informing the management about the implications of IT systems for their business operations. Moreover, he was expected to innovate systems that enabled the bank to deliver their products efficiently and in a competitive manner.

- He was the driver of IT strategies related to the IT infrastructure in the bank.

- He played a liaison role with the regional office, communicating the bank's IT needs and implementing any global IT strategies filtered through to them from the regional office.

- With regard to his role in business goals, he was an advisor, expected to suggest ways of supporting business goals and products. However, he did not drive the business goals nor was he allowed to exceed his role as a supporter of business products. He was invited to business steering committees only when they considered an issue related to his department.

".. they have put me for one whole year doing programming, system analysis and all of this stuff and after one year I came as a consultant. One year of exposure to the IT exposed me to the fact that people don't actually understand each other.. and that is why I became a consultant.. which basically I understand the business requirements, suggest idea solutions to them and to the IT guy and explain to him what the business requirements are. We need to work in conjunction.. Users

can't realise what machines can do for them, and technology guys are convinced that users keep changing their minds very often.." IT manager.

".. The people in IT have a dual role. One is the system role, it means the ... development, the implementation, the maintenance and enhancement of the systems.. The second one is the information role, where they bring to the business who are really non-technical people the potential that are available from new technologies.." CEO

Role of IT and IT manager: Supports

Business needs

".. He will come in on product development first of all.. he is again in terms of cost, as we constantly seek to drive cost down, or maintain cost then he plays a very important role in terms of his information skills .. in other words, I know a product that can do this for you for half the price and it will save you this.. He is on the innovative side in determining how systems will be developed that will sell products.. that will give competitive advantage.. and that is essentially his role in strategy.. it is very much a support role.. it is not a driving role.. IT does not drive our strategy, the business drives our strategy and the IT plays a very very supportive role.." CEO.

Relationship between business strategies and IT strategies:

The informants stressed that business strategies, and their product delivery, needed to capitalise on IT to deliver at a lower cost. As mentioned earlier, the consumer finance system was an example of capitalising on IT to deliver products.

Transformation to the new infrastructure had a time lag effect on the bank's ability to capitalise on its IT systems to meet its business goals. Transforming to the new IT environment needed as long as three years to complete, during which time the bank had

to make do with the old environment, including all its deficiencies. The bank was not able during that period to capitalise on its main IT systems[1] to meet its business goals. The IT strategy in the transformation phase was more concerned with the technical issue of transforming to the new IT environment than dealing with the direct business needs:

> ".. we were compelled to accept the old system this year.. .... if I were to sit down and rewrite my entire banking system today, let say to suit the AS 400 environment, it is a three year project.. moreover, we have IT standards and concepts and strategies laid down. So there is always a time lag in such decision being made and to that extent we are suffering .. it is so bad that we need to look at it.."

Bank's culture and IT:

This section discusses aspects related to the bank's IT culture, which are summarised below.

The bank's culture was shaped by its centralised approach to IT strategies. This type of centralisation created problems of responsiveness to the local IT needs. The group realised this was a difficulty so acted to decrease the level of centralisation by giving regional offices more autonomy. Despite this decision, problems of responsiveness to local needs remained due to the domination of a centralised culture.

Another characteristic of the bank's culture was their cost consciousness. In its evaluation of the IT projects, the bank sought cost justification for them. The CEO, for example, mentioned that the bank was sceptical about the shared ATM network due to a

---

[1] The bank used the PCs to meet the unique IT needs that the main system was not able to support.

lack of desire to spend a lot on it.

The bank's scepticism about the shared ATM network and its potential benefits may be attributed to the bank's tradition of serving the wealthy segment of the market. Accepting cost uncertainty with a project that was not directed at this segment was problematic to the bank, despite the fact that it also served the consumer segment which needed this service.

A cultural gap was one issue that the IT manager mentioned. He talked about his role in bridging the gap that existed due to the pace of change within the technological environment. In addition, he discussed the inertia caused by established ways and norms of doing things, in addition to other factors such as the lack of knowledge and appreciation for the role of IT by the users. The CEO also addressed this problem, as indicated in the following quotation:

> ".. Certainly in Bahrain.. a lack of understanding of the benefit of IT on the business side.. this is historic.. if you don't educate your people into what a system can do, they wouldn't even know that they can do it.. they wouldn't even think about it.. so this year we are embarking on a major policy education...... we do run various courses, one is management of the IT. For the most part we are progressing through a close contact between IT and the business..." CEO.

> ".. there are two problems here basically. Users can't realise what the machines can do for them. and technology guys are convinced that users keep changing their minds very often....... there are times because of experience and exposure... you actually suggest better ways of doing the same thing to the user...". IT manager.

Although both parties did not explicitly declare it, there was tension about the perceived role of IT manager. The CEO believed that the IT manager's role was supportive rather than directive to the business goals, and therefore he was not invited to all business meetings. He was invited only to those meetings in which they wanted to discuss possible IT support. The IT manager believed that a better arrangement would have

189

been to give him a greater role in participating with the business units at the early stages of their product development, instead of inviting him after they had finished setting their goals. By doing so, they would be more efficient in the design of their services, and the likelihood of failure would be less.

Problems:

Problems that were raised with regard to the adoption of IT were as follows:

- The centralised IT strategy was not as responsive as the bank in Bahrain would have liked. The long communication lines resulted in issues getting "diluted" and, consequently, the responsiveness to the local market was not as fast as that of local competitors.

- The deficiency of the old IT system was a problem for the bank.

- The regulations in Bahrain discouraged laying off employees. Therefore, substituting IT in the place of Bahraini employees was perceived as an obstacle against achieving a cost reduction strategy.

- Closing down the cultural gap was a challenging task. As mentioned earlier, education programs were designed to decrease the level of inertia amongst the users.

- Expanding the scope of the IT manager role was a concern of the IT manager. He wanted his participation to begin at an earlier stage in the business strategies.

Foreign Bank Five (F5)

Introduction:

Foreign Bank Five (F5) was a joint venture bank between local investors and an international banking group. According to a consultant report, the bank is considered to be a smaller player in the market.

I interviewed three informants: the operations manager, the retail and private banking manager, and a supervisor within the EDP department.

The operations manager had been transferred to Bahrain by the group and had spent around six months in his current position. His previous experience was all with the group where he worked in the operations area. He participated in developing and implementing IT projects.

The retail and private banking manager started working within the banking industry in 1983 when he joined a leading local bank. In 1988, he joined Foreign Bank Five as a manager of corporate finance. In 1994, he headed the private banking unit.

The EDP supervisor joined the EDP unit with no computing experience. He gained his experience, which involved running the operations of the EDP, from working within the section. He was mainly responsible for the EDP operations.

Business Focus:

Factors affecting the competitiveness of the bank:

The operations manager defined a number of factors that he perceived as having an impact on the bank's competitiveness (see Figure 1). The social contacts and networks of the top management and the local board of directors were perceived to be
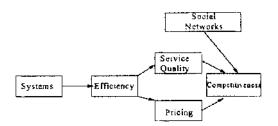
Figure 1: Factors affecting F5 competitiveness

crucial factors for creating business for the bank. The retail and private banking manager added that their marketing team contacts with the potential clients were crucial for business.

In addition to the social networks, the operations manager believed that achieving a competitive service quality and competitive pricing rates were two factors affecting their competitive position in the Bahraini market, which was characterised as being over-banked, with banks following each other closely. He perceived IT as having a potential effect on the quality of service and the ability of the bank to offer competitive rates. However, this was not the case with the bank due to their deficient IT systems, as will be discussed later.

Bank's business focus:

F5 operations were in the retail, corporate, commercial, and treasury businesses. However, the informants believed that there was more business potential in retail than the other areas.

The retail and private banking manager mentioned that products such as letter of credits (LCs) and letter of guarantees (LGs) directed to the corporate and commercial segments, and personal loans such as home loans and car loans directed to the retail segment, were the most important sources of the bank's revenue.

The bank, through its personal contacts with some of the major companies, had secured a niche in the market. A competent marketing team and the contacts of the local board members were perceived as important factors for securing this niche.

The bank capitalised on its world wide branch network to provide services to corporate clients willing to operate in Bahrain, or to local companies and businesses willing to finance their trade in other parts of the world. The retail manager perceived the bank as being more competitive in this area than the local banks, due to its global branch network.

The retail manager, however, perceived the bank as being more expensive in terms of their product prices than their competitors. They offered differential services with their products to make them more attractive to the clients. For example, they offered longer repayment periods on their loans than the other banks. Nonetheless, they had to revise their price strategies to adjust to the competition level from time to time.

Role of IT:

Current IT systems are "still in the days of the ark":

The operations manager expressed his dissatisfaction with the IT scene in the bank. It was based on an outmoded batch-processing concept, and was inefficient in supporting the bank's operational needs. It needed long hours of processing beyond the normal working hours, which dictated paying either overtime or shift allowances to the staff handling these systems.

As for supporting the business needs, the informant believed that their systems played only a minor role, if any, in supporting their business needs and had put the bank at a competitive disadvantage as compared to their rivals. It was not economically and technically feasible to upgrade the current IT systems. For example, these systems could not support phone banking, electronic banking, and credit card systems, which their international rivals had introduced.

> ".. to use an English expression, we are still in the days of the ark. We have batch system which is falling apart at the seams. It is really in a terrible condition. Its value to the business... there is a value but it is minimum.. {it} produces mountains of paper, probably more than necessary. All what we have done perhaps was you introduce a computer system which cost the same as employing however many ledger clerks with books.. it is slow, inefficient, and really not a lot better than people filling in ledger books..
>
> our system is perhaps ... you might relate it to an old, if you know the Morris Minor. an old English car which was around when I was a child. Everybody is currently trying to put the electric windows in this car, which is absolutely wonderful, but the cost of doing so is to have a trailer behind the car with all the batteries and the equipment necessary to drive it.."

The bank's outmoded batch system affected their competitiveness as it prevented them from providing a quality of service similar to that of their rivals, who already had on-line systems.

The retail and private banking manager did not perceive a strategic role for IT systems in his business area. He believed that IT did not play a role in supporting the asset side of the balance sheet, such as loans. Moreover, he believed that the bank needed, instead, a good marketing team that could create business links through personal contacts.

"Q. Do you think that IT has affected your products?

Retail and private banking manager: No, IT was not a major thing with regard to the above products. We extend finance and we are very selective in this area. IT has a useful role but it is not a major role..

... increasing the assets means that you increase the loans and the overdraft, these are the main assets.. deposits are liability for the bank. If I have a deposit and I pay interest and I don't have assets to match, there will be assets mismatch. If I don't use them, then I am going to lose. I have to increase my assets, I have to be competitive in the market. I need a strong marketing team that go outside and market my products.. now this year we are making a budget for 1995, how are we going to increase our assets? There are many factors into it. The major thing is interest rate. If our rates are not competitive we need to adjust, are we efficient? If somebody applies for a loan. how long does it take to process {his application}.. I don't think that IT is highly involved to verify the status of the applicant.."

Despite the deficiencies of the bank's IT systems, the informants believed that IT played a more important role in the retail business than in the other areas. Its role is summarised by the following points:

- handles the growing volume of transactions, e.g. the ATMs;

- essential for increasing the size of the branch network.

A more important role for IT within the foreseeable future:
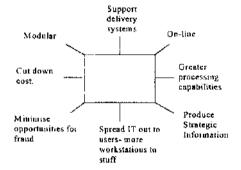
The operations manager believed that IT would be a source of threat to the bank in the future as it develops further. In the retail sector, it would "make or break" the bank. The bank would have to introduce more efficient delivery systems to its retail customers, capable of providing services similar to what the competitors were

providing, and enabling the bank to control the cost of the growing volume of transactions.

As for the corporate banking business, the bank's current IT systems were perceived as having only minor importance. Nonetheless, the operations manager perceived a more important role for their proposed electronic banking system, directed at the corporate segment. The future system would enable the clients to perform their banking activities from their premises.

The bank's current system was also of little importance to the treasure business. However, it was planning to acquire some systems that the operations manager perceived as being important to generate revenue, such as Router Dealing System.

Figure 2 summarises the qualities that the operations manager expected to see in their new system.

IT as a competitive necessity:

Figure 2: Characteristics of the new system

The ATMs were adopted as a defensive measure on a recommendation from the bank's operations manager at that time in response to the rivals' ATM threat, according to the EDP supervisor.

It is available any way:

The retail and private banking manager described phone banking as being of limited importance to the bank, due to the small customer base of the bank. Nonetheless, since

it was available within the group, they were planning to introduce phone banking to the local market once they had revamped their old system.

Limited customer base and limited importance of some IT systems:

As mentioned above, the small customer base of the bank decreased the perceived strategic importance of some IT systems. The EFTPoS was an example.

Improve the bank's image:

The retail and private banking manager perceived a potential role for IT to improve their image through matching their rivals' advanced systems:
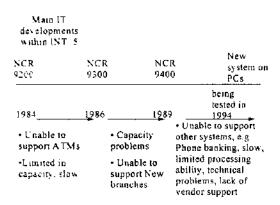
> ".. if you have more sophisticated technology, this will upgrade the image of the bank in the market.... I think that I need IT to improve the image of my department. I should bring this to the attention of the executive committee. I say, 'well the other retail departments in the market have these systems and they are doing very well, if you want us to compete with them we must have this system'.."

Banks differed in the stages of development cycle, but were heading towards the same path:

The operations manager perceived that all of the banks were using IT more or less similarly. However, the banks differed in their current position in the development cycle. F5 was falling behind the other banks in terms of its IT infrastructure and delivery systems. Nonetheless, the bank was in the process of catching up with its rivals through the provision of similar systems.

Main IT developments:

The bank started its automation in 1984 with NCR 9200. It upgraded its system within the series of NCR platforms. As *Figure 3* shows, performance deficiencies were associated with each of the platforms.

Figure 3: Main IT developments with F5

The bank's system was batch oriented, which required 'end of the day' and 'end of the month' processing. The upgrade from the NCR 9300 to the 9400 enabled the bank to decrease the end of the day processing from 6 to 4 hours, which was not a significant improvement. The end of the month processing was problematic to the bank, as it needed longer hours of processing, which made meeting the month end central bank report requirements a burden on the bank's employees, due to the deficiency of their system.

Another problem of the batch system was its slow responsiveness to the retail clients. When clients' salaries were transferred to the branches due to the nature of the batch system, the accounts were not updated until days later, which prevented the clients from withdrawing their salaries as soon as they were credited to their accounts. To overcome this problem, the bank introduced an on-line system at the main office through which all salaries were transferred to the main office instead of the branches, enabling instant updates to the clients' accounts. This was not an efficient remedy, however, as there were other problems related to the batch system.

Around 1989, the bank introduced its ATMs to the Bahrain branch. According to the EDP supervisor, the introduction of the ATMs was in response to a competitive threat from the other banks, who had their ATMs prior to F 5.

The bank installed a number of ATMs in its branches in Bahrain, however, these ATMs were not as advanced as its competitors' ATMs. Most of the ATMs in F5 were limited to dispensing cash. Only one branch had recently upgraded its ATM to accept deposits.

The core banking system was developed by the end of the seventies, and since then there had been no major developments. Nonetheless, minor developments were provided by local software houses to meet the unique requirements of the bank.

According to the operations manager, in 1994 the group was planning to introduce new systems operating in a UNIX environment to replace the old ones. The new systems were expected to enable a quantum leap in the bank's efficiency and the quality of services it could support.

The group was partially directed towards downsizing its systems. The EDP supervisor said that they were expecting a new system, being tested in one of the group's branches within the region, which would run on a downsized PC environment. The new system was designed to solve the technical problems of the old system. Moreover, it supported other systems. such as phone banking, that the old infrastructure could not support.

The bank was expecting its application systems (especially the 'off-the-shelf' applications) to be released to them through the communication lines from the bank headquarters. It was cheaper for the branch in Bahrain to get their systems by this means. since they would not have to pay commission or tax to any third parties. This gave the bank an advantage over the local banks.

Other projects that were in the pipeline were the bank's credit cards, the group-shared ATM network, telephone banking, electronic banking, and foreign exchange information system. All of these projects were expected to be launched by the group. As mentioned earlier, the bank was going more or less in the same direction of its rivals, the difference being, however, in the development stage.

Formation of IT strategy:

Absence of IT strategy:

The operations manager said that he was responsible for determining the bank's IT needs. However, there had been no IT strategy within the bank for a considerable while. As mentioned earlier, the bank's systems were old and outmoded, and had been with the bank for a long period of time:

> Q: "When was the first IT strategy produced?"
>
> Operations manager: "It has not been done yet.. (he laughed). I don't believe that since we took the existing system there has ever been a formal IT strategy documented..
>
> .. as I said, at the present time we don't have a formal IT strategy. It is my target over the next few months to create one for here..."

The retail and private banking manager had not participated in any IT strategic planning activities. He said that these issues were not his department's concerns. At the end of the interview, the informant apologised for not being able to answer all of my questions for he was not fully aware about the "computer", as he described it.

> Q. "Could you describe the IT environment within your bank, the main IT developments?".
>
> Retail manager: "really I don't have an idea about that, because as I said that is a separate department. I remember that the mainframe was launched in 1984. I don't have much to say about the developments within this bank. We are marketing.. we don't have any background.."

Dependence on the group for acquiring their main systems:

The bank depended on its banking group for acquiring its IT systems. As mentioned earlier, the bank was expecting a new system to replace its old deficient system. The group was the source of this system and the source for the overall group IT strategy as well.

There were some local initiatives, however. The branch in Bahrain previously had requested some systems, such as the ATMs. The initiative to do this was taken by the operations manager, and the GM approached the group to acquire the systems. Usually, the headquarters evaluated whether any other branches within the region had any interest in the same project and then launched it into the region. The process of acquiring systems to suit the local needs required a lot of pushing from the branch and took time to acquire from the headquarters.

The board of directors had the right to reject projects from the group, due to the joint venture nature of the bank. The board of directors for F 5 in Bahrain was made up of representatives from the group who looked after its interests and local businessmen who fostered the interests of the local shareholders. The operations manager said that the group's directors usually supported the group's solutions. As for the local directors, most of them were businessmen rather than bankers and had little influence over the direction of the IT scene within the bank.

Time horizon for the bank's IT strategies:

The operations manager described their business strategies as being short-term in nature:

> "Q. When was the first strategic plan produced?
>
> Operations manager: in 82, 83... as part of our budget process, it has to be done twice a year because we have to do two budgets. We do a budget for the local directors, but we have to do a Group budget...
>
> Q. What is the horizon of your strategic plans?
>
> Operations manager: at the moment it is fairly short term, we are talking one year to two years.. I can't actually talk too much about that... that's confidential plans that is flying around with the board at the moment..."

As the above quotation illustrate, strategies meant budgets to a great extent, and they were not longer than two years. The informant claimed that business plans were directing IT strategies, which he claimed to be long-term in nature, around five years. It was not clear to me as to how the short horizon business strategies were directing the long horizon IT strategies. It seemed from the informant's answer that the bank's local business strategies had little influence over the group's IT strategy. What did direct the grand IT strategies instead, were the established traditional lines of business that the Group branches were involved in for the long run, and for these well-established line of businesses, there were 'generic' IT systems that became the norm to introduce within the banking industry:

> "... if you are getting into an IT strategy and it is going to take five years, it would basically require as part of that a conformation that this strategy is likely to meet the foreseeable business strategy for the bank over the period that we are talking of. You can't divorce them. Having said that again, we are talking about a bank that is heavily into the retail market, heavily into a corporate and we have treasury. And that three segments would remain the core of our business. That is clear and straight forward. What you might do in terms of business strategy, may perhaps perceive the products that you want to put forward, a way of getting business, a way of being more profitable, giving better service and perhaps add another things, such as do we want to do any business here with the Eastern Province of Saudi, which is not going to detract from what your underlying business is, it may add things to it..."

Role of the operations manager:

The IT scene within the bank was the responsibility of the operations manager. He was the liaison with the headquarters and was responsible for defining local IT needs within the bank, although no previous studies had been prepared for the branch in Bahrain.

Relationship with the supplier:

F5 maintained a long relationship with NCR. It progressed through the NCR computing platform series. However, the relationship ended when the bank's headquarters evaluated other vendors that could implement their new global IT strategies. In addition to that, the bank seemed as it was drifting partially to a downsized environment. The one software vendor that the EDP supervisor did mention was Microsoft, from which the bank was planning to get its PC applications. The bank was in a turnaround phase in its IT strategy and in its relationships with vendors. The operations manager did not disclose any details as to who was the future vendor might be.

Driver:

The main driver for the IT initiatives was the bank's headquarters. The main strategy was expected to come from there, and when a strategy was not available from the headquarters, it was also absent from the branch in Bahrain.

The deficiencies of the old system and its inability to address infrastructure needs, as well as the bank's business needs, drove the bank to embark on entirely new infrastructure designs and systems.

There were other drivers. though minor in nature, which came from the regulatory body. The central bank implemented an automated cheque clearing system and requested that all of the banks buy encoding machines. However, the clearing system, operating within the central bank did not assist the bank in enhancing its operations. There was no benefit gained by the bank from the automated clearing system, as they needed to manually process the output from the central bank processing.. Moreover, preparing the cheques

before sending them to the central bank required human interaction with the encoding machine, which was no different, in terms of efficiency, from the manual process that the bank had used. The encoder that they bought was perceived as an additional cost to the bank, which they had to accept.

Bank's culture - IT is a "demanding mistress":

The group, as described by the operations manager, did not have any commitment or support for the branch in Bahrain, with regard to its IT needs:

> ".. It is a question of commitment.. perhaps I should say this, the bank that owned us has not had that commitment, unfortunately.."

IT-related decisions were highly centralised within the headquarters which gave the bank in Bahrain little, if any, flexibility in deciding what systems they needed:

> ".. our hardware is ten years old as well, and we can't get a replacement for it. Again that is a question of how each bank operates, what freedom each territory has got in the investment that each bank is making at the head-office level in IT development .. at the moment I would say that we have a disadvantage because of that.."

The local directors were cost sensitive, as they were more concerned with how much the system would cost than its implications to the business:

> Q. "What are the main inhibitors of using IT in the bank?"
>
> Retail and private banking manager: "Cost of technology. You have to invest a lot of money. A small bank like {F 5} alone can't invest 2 or 3 million dollars on IT. This is the main factor. The problem here is that the decision is not taken by one, there is always a committee and then we introduce it to the management and if they feel that this is a good product and service, then they will see the cost, the cost is a major thing. This is mainly because of the size of the bank. The L4 invest a lot of money and they will cover it in shorter time because they have a larger base. But for us, it will take longer years. The capital expenditure will affect the balance sheet. At the end of the year they want to see good balance sheet, strong assets, good income. But when it comes to capital expenditure they will postpone it to the next years..."

The above quotation may give a sense of the bank's culture. As mentioned above, the bank was more sensitive to the cost of IT than its implications to the bank's business. Pleasing the short-term interests of the shareholders was perceived by the retail manager as discouraging investment in IT. IT was perceived as a source of cost that was hard to keep up with. It was like a 'demanding mistress' that required more and more resources, as the operations manager described.

The operations manager narrated a story about his experience in participating in the development of a main system at the headquarters. The following are the issues that can be inferred from the story:

A cultural gap existed between the systems' staff and the users, characterised by:

- a lack of collaboration between the two parties;

- overly technical IT staff who were unable to communicate with the users;

- underqualified users who were unable to define their needs and appreciate the importance of their role in the development process; and

- a perception that IT was responsibility of the systems unit, which resulted in the development of a system that was technically oriented rather than user friendly, something which lacked the acceptance of the users.

Problems associated with the adoption of IT:

The problems associated with the adoption of IT are related to those discussed in the case, particularly within the bank's culture. The following is a summary of these problems:

- lack of support for IT strategies from the bank's group and the local board;

- lack of IT strategies;

- deficiency of the systems;

- highly centralised IT decisions. lack of responsiveness to local needs, and a poor ability to keep up with the developments within the IT environment;

- existence of a cultural gap between the users and the technical staff;

- the size of the bank in Bahrain and its customer base were perceived as discouraging factors for investing in IT; and

- increasing risk of failure as the IT project grew larger in scale.

This quotation from the operations manager discusses further problems associated with the adoption of IT within the bank:

".. one of the main problems is trying to prove that adoption of particular strategy is going to pay for itself and more. The project that I keep referring to at {named the bank home country}, the director of the international division required that some business studies be undertaken to show that sufficient income be generated out of this project to more than pay the cost of the project. That is a phenomenal task if you think of the number of territories, which are close to 40. And the number of variables and all of these are based on systems that we don't actually know. We don't know the capabilities of the system. I don't.

.. and the management perception of IT. That is another major issue. Management don't tend to get involved with the details of a system. But they generate their own perception to what they expect to get out of this system and you have one a heck of a job to persuade them that they were wrong to create that perception, but in any case what the system is doing is worth it.. beyond this the project is too big, it can't be managed properly, insufficient resources devoted to it.. the computer is very demanding mistress!... and you will find that you will never satisfy the users' needs any way.."

From the above quotation the following problems are inferred:

- tendency to assess the IT initiatives based on quantifying their return which was not feasible as narrated above;

- limited involvement of the management in the development process; and

- a difficulty with meeting the expectations of the management and the users, as the systems initiatives tended to be run by the technical staff more than by the business staff.

Foreign Bank Six (F6)

Introduction:

Foreign Bank Six (F6) is an international bank with a large, world-wide branch network.

The informants I interviewed within F 6 were the bank's deputy manager, the retail manager, the technical support (TS) manager, and the services manager. All of the interviews were tape recorded. There were other informants within the lower ranks who I also interviewed. However, this case is mainly based on the views of the above four informants who were part of the top management team.

Business focus:

The deputy manager described the banking industry in Bahrain as being overbanked and unsophisticated in the nature of its product demand. The banks, despite their different level of sophistication, were able to compete equally in this market.

The deputy manager added that the main factor affecting the competitive environment was price rates, and due to the low sophistication of the market, technology in areas other than retail was not a key factor in determining the competitiveness of the banks:

> ".. from my point of view.. what affects the competitive climate at present is only pricing. There are very few customers who are looking for quality service. There is very little need on behalf of the customers for sophisticated products.. you can say that 90% of our customers have just simple needs - overdraft, loan, documentary credits, etc.-.. that is why the technology does not come to it.. at the end, it is pricing what matters..

The services manager added to price rates, social connections, innovative products, and technology, as factors affecting the banks' competitiveness. As for social connections, the services manager perceived social ties in Bahrain as being very strong. Capitalising on these ties and establishing connections with the wealthy families were perceived as

one of the means for capturing business opportunities for the bank. Technology, especially within the retail business, was a means of competing between the banks. Products such as credit cards and phone banking services were provided free of charge to the public, with some banks providing these services even to customers who are not their clients.

The informants believed that their bank, as a foreign bank, was not able to compete on equal footing with the local banks in every aspect of business due to the regulations affecting the Bahraini market. The foreign banks were restricted in the number of branches they were able to open and accordingly were not able to have branch networks as large as those owned by some of the local banks.

According to the deputy manager, the bank's strategy was not to compete on prices but to build their strategies around their long relationship with their wealthy client base.

The retail manager added that they were seeking niches within their traditional broad business areas of retail, corporate, and treasury. He defined the bank's target market of customers sophisticated enough to buy their products as HWI (high worth individuals) and PME (professionals, managers and executives). The technical support manager and the deputy manager mentioned that a few years earlier the bank had shed a large number of accounts that were of low value to the bank in order to become more customer focused.

Perceived role of IT:

IT to manage cost within the giant Group:

IT was perceived as the means to manage the international giant banking group to which the Bahraini-based branch belonged.

A primary role of IT within the giant banking group F6 belonged to was to control cost and promote efficiency which was perceived as intimately linked to promoting quality services. Manual transaction processing, according to the technical support manager, was the main source of cost as their MIS system indicated. Automating repetitive transactions was perceived as being the 'heart of technology', the TS manager claimed.

IT to create a global bank:

A very strategic role for IT was interconnecting the group systems through a Wide Area Network (WAN). This distinguished F6 from its competitors including the international ones operating in Bahrain, which were not at the same level of global connectivity. Without the communication aspect of IT, the bank's systems would turn into isolated islands unable to deliver 'global' services.

Globalizing was achieved through the products the group offered to the clients and through interconnecting and controlling the internal processing of the group's global operations. The bank offered a wide variety of banking products and services that could be obtained from wherever the clients were located. Each client was considered as an international client with an international ID number assigned to him to enable him to perform his banking activities wherever he might be. Electronic banking systems, world-wide, connectivity of the group ATMs, and international alliances with international ATM networks were amongst the global products the bank offered to its clients. As for the operations, the group systems enabled the bank to operate as one bank rather than isolated banks. IT enabled centralising expertise and decision making, for example, through the group's interconnected systems, where transactions beyond a certain level were directed to the concerned authorities outside Bahrain for approval. Moreover, IT enabled financial consolidation, control and monitoring of the branches' financial position at a world-wide level.

Strategic potential of IT:

IT played a very important strategic role for the corporate business internationally. The group electronic banking system was initiated in the mid-eighties as a defensive measure after it had lost major corporate clients to their American competitors. According to the retail manager, for the major international markets, their electronic banking system was a switching cost to their corporate clients. Internationally, IT played a more vital role in serving the corporate than the retail segment as the risk and return of the corporate segment were higher, the TS manager argued.

Within the local Bahraini market, however, the case was different. IT was perceived as more crucial for the bank's retail business than its corporate business, while IT was of lesser importance to the treasury business. The Bahraini market was more sophisticated in terms of retail related products. There was stiff competition between the banks for retail products. Keeping in line with the competitors was perceived as a competitive necessity, even if there was no substantial return from that type of service or product. To quote the retail manager:

> ".. our customers are increasingly sophisticated, they expect more and more, and our competitors Local Four and Local Fifth.. they are forever introducing new systems they are spending money. They are making life better for their customers... frankly, in some cases we lose money on them. I would be the first to admit that. But sometimes you have to launch what we call lose-leaders to retain customers and to live up to expectations..".

The deputy manager, who was also the corporate banking manager, believed that for their corporate banking market, in contrast to the retail business, introducing products like electronic banking was a luxury that had had little strategic effect on creating business opportunities. He believed that the corporate market was not yet sophisticated enough for that type of product:

> ".. Which is more important, {our electronic banking} or the other retail systems?... if we are talking the other way around.. if we say let's decide to stop {the electronic banking} or stop the ATM, which one is more adverse to me.. it is the one that serves the larger number of customers, the ATM.. electronic banking is serving only 30 to 40 customers.. so if I stopped offering it, no other bank offer it.. we offer it as just something that is different from the market. The usage is very limited. It is very nice to talk about it, it is a thing that is very nice to be proud of .. but at the end of the day when you talk about money. Indeed we are giving it free to tell people to use this service.. we want to encourage them.. this product is for year 2010 for Bahrain.. not now..".

Despite the huge inventory of IT solutions with the bank's group, the small volume of transactions in Bahrain with regard to some operations made these systems cost-ineffective to adopt. An example was a treasury system that was available from the regional office but which the bank declined from adopting due to the relatively small volume of treasury operations.

IT as a competitive weapon:

The informants perceived IT as a competitive tool both internally and externally. Within the boundaries of the bank, IT was perceived as a tool for promoting efficiency and controlling cost. Beyond the bank's boundaries, IT was perceived as a competitive tool through providing more delivery products of a global nature to its clients.

As mentioned earlier, the bank had to launch some retail IT-related products as a defensive measure, despite their low return.

IT as a bane to the management:

The TS manager perceived the bank group's MIS system as a very sophisticated one that enabled the managers of business units to determine profitability by market, product and client.

Despite the perceived advantage, the business unit managers, the deputy and the retail managers, perceived the system as a bane. Both informants argued that they were serving the system rather than being served by it. The deputy manager said that many of the users did not believe in the system.

Another system which did not satisfy the users, especially the deputy manager, was the main banking system (MBS) that replaced the bank's old system, the CIF. The new system was not tailored to meet the bank's unique requirements. Furthermore, there were facilities that the old system provided which the new system did not.

".. when you are talking about MIS, I don't think that we are here lucky with MIS.. although we have a system.. but it ended up by serving MIS rather than the other way around..

I don't believe that there is an MIS that is 100% accurate. I challenge any management accountant that says that my system is 100% right. These are mostly based on assumptions, but it is better than having nothing ... it benefited us to see whether each cost centre is making profit or not.. but so what !! what has it done for us? Although at the end of the day we know, we have done nothing about it because we don't believe inside, we don't believe in it.. when we implemented that it was not on a solid base, always you have a doubt and always there is big problem when you are fixing the recoveries.. who is going to charge what charges.. how many times you are going to change your allocation of cost.. there is some cost, indirect cost, you don't know where to charge it.. like for example, we are paying 200,000 BD per annum as a commercial registration fees.. to which cost centre you will allocate that?.. if you allocate it to any cost centre you will ruin his profitability, and that cost centre won't have any incentives to make business... It requires a lot of hard work for people to believe in it.. within my organisation, especially the users do not believe in it.. when they have their report, they just throw it away.." Deputy manager.

All of the banks are using IT more or less similarly:

The deputy manager believed that all of the banks were using their IT systems in more or less the same way, with a few enhancements that differentiated one competitor from the other.

As mentioned earlier, the informant believed that the banks in Bahrain were able to meet the unsophisticated demands of the local market. Therefore, the banks were homogenous in terms of their IT related systems:

".. you have to be in line with the competitors, you should not be behind them.. I don't think that we are different.. everybody offers the same thing.. some have some enhancements but at the end of the day the basic requirements are the same.. everybody has ATMs.. but if you have direct debit and EFTPoS, yes they are better than us..".

Main IT developments:

Global Data Network:

The Global Data Network (GDN) was one of the most strategic systems for the bank. The GDN was proposed by the general manager of the technical support division at the bank's group headquarters in 1983. The project aimed at providing financial services to corporate clients over a group-owned network. The project started with a vision of

connecting seven group locations. A year later, the technical support division proposed widening the scope of the GDN to encompass all group locations and using it as the back bone of other global systems. The main benefit from the GDN lie in its future role in removing the cost associated with providing new information based services and products with communication facilities of their own. The GDN provided support without additional investment for a number of systems, such as:

- Branch computer connections

- Group E-mail

- Global ATM/ International cash service

- Corporate database facilities

- Limits Access (directing decisions related to transactions beyond a certain level to the appropriate personnel within the group)

- Electronic Banking products

- Other future services (that may not be planned for yet).

"Main Banking System" (pseudonym)

"Main Banking System" (MBS) is a sophisticated accounting and central information system, compressing a family of system applications which access essential information from a central data base.

"MBS" was the back bone upon which other modular systems were built, e.g. EFTPoS, credit cards, trade and credit information, fixed assets, income and expenditure, general ledger, securities, offshore banking units, treasury trading system, mortgage and finance, automated funds transfer, term deposits, demand deposits, etc..

"MBS" was designed and developed in-house to replace and overcome the problems of the bank's old system. The old system needed expensive maintenance and alteration as new systems were introduced. In contrast, "MBS" required minimal maintenance and alteration as it was based on a central data base that any new systems could share.

The informants considered MBS as the most important system in the bank as it ran the majority of their internal operations. It is worth mentioning that MBS runs on IBM AS400.

Electronic Banking System:

The group's electronic banking system was perceived by the bank's international competitors as being one of the most sophisticated available, unmatched by their systems in terms of variety of services.

The bank group introduced its system as a result of a loss of two of its major international corporate clients to its American rivals. When the bank introduced their electronic banking system in the mid eighties it was not immediately successful. However, advancements in the IT enabled the group to introduce more services through their electronic banking system.

F6 was the first bank in Bahrain to introduce its electronic banking system and, to encourage its use, it was offered free of charge to around 40 to 60 potential customers.

The system provided a wide range of services such as a consolidated cash-management control. trade services, securities transaction administration and market information.

Trade finance system:

The bank was expecting an automated trade finance system from the regional office. The new system automated the entire trade finance transaction cycle.

Other systems:

The informants mentioned other group systems that they were using in their operations such as the group e-mail system and the treasury system. All these systems were based on the "Main Banking System" and enabled global interchange of transactions and information.

Retail Systems:

The bank was the first to introduce its ATM systems and phone banking system. The ATMs were globally interlinked with other global ATM networks. The bank's phone banking was the first in Bahrain, but it was not as successful as its rivals' systems due to the limited services it provided. The bank also provided credit cards.

There were other systems in the group IT inventory but these systems were not introduced in Bahrain either due to the low level of transactions, as the TS claimed, or the lack of sensitivity of the global IT strategy to local IT needs, as the retail and the deputy managers argued. The EFTPoS was an example of a systems that the TS manager believed was not feasible to introduce due to the lower level of transaction volume in Bahrain.

Drivers of IT strategy:

The drivers of IT strategy are divided into two broad categories: those that came from the banking group and local drivers.

The grand IT strategies developed by the group dictated what systems to develop and when the bank in Bahrain would receive them. The main banking system, the automated trade system, and the group e-mail systems were some of the compulsory systems that the bank had to adopt. The bank in Bahrain was not authorised to make any changes or enhancements to these systems.

The group was not as responsive to the Bahraini needs as to those of the major markets. Competing in the major strategic markets dictated that the bank develop systems to meet their sophisticated competitive requirements. For example, the electronic banking system was developed to meet the requirements of corporate clients within the major international markets, and the global data network was introduced to interconnect the major international markets initially and, at later phase, smaller markets in other geographical areas. Achieving standardisation and economies of scale were amongst the drivers of the group's global initiatives.

As for the local drivers, there were two main ones. The first driver was to enhance the bank's internal efficiency. To quote the TS manager:

> ".. on the microscale in Bahrain, for example, people like me together with other people who are in the business would come by either seeing that the competitors are doing some thing that we are not , or saying that we are doing this in the wrong way..."

The other driver was related to the competitors' actions. The competitors, especially within the retail business, were very active in introducing IT-related products. The bank's phone banking system, though it was the first in Bahrain, could not match the services offered by local banks. Therefore, the bank was in the process of upgrading its phone banking system.

> ".. our customers are increasingly sophisticated.. they expect more and more, and our competitors, Local Four and Local Fifth, are for ever introducing new systems, they are spending money. They are making life better for their customers. Banks compete with each other.. some times we are prompted to launch products just as a defensive measure to reinforce the fact that we are not losing our grip on the technology lead we have.." Retail manager.

> ".. you have to make investment in new technology to keep up with the competition. You can't say actually how much extra business your ATMs will bring in, but if you did not have them you would lose business. To an extent, it is a defensive measure.."

> ".. the {bank} did have a reputation for several years for being the most technologically advanced bank in Bahrain. To an extent, this has been eroded, because the other banks are very good at that sort of thing.." Services manager.

The informants perceived themselves as having had their technological leadership in the market eroded by the competitors. Keeping a tight grip on their technological leadership was perceived as crucial for saving their image as providers of a high quality service.

The formulation of the bank's local corporate strategies:

The strategic plans within the bank were highly influenced by regional and head office strategic plans. The local strategic plans were formulated within a top management steering committee. The CEO and his top management crew participated in this committee, in addition to members from the planning department at the regional office who came to Bahrain precisely for this purpose. The local strategic plans for the bank in Bahrain were guided and controlled by the strategic plans of the regional area. Once the local strategic plans were formulated, the bank sent them to the headquarters for approval.

The formulation of IT strategies:

The "giant" banking group's IT strategy:

The bank group's IT strategies were centralised at its group headquarters level. All systems developments to enable the group to achieve economies of scale and have better control over the systems were made at group development centres. The banking group, as the TS manager described, never depended on any third parties for developing their systems. For small branches like Bahrain, the application systems were transferred through the group's global data network.

A senseless giant:

The group's IT strategies considered first the needs of the major strategic markets in which the group operates. For smaller markets such as the Bahraini, the group was less responsive to the competition from local banks' superior IT systems and the demands of branch users for systems more customised to the local needs.

The bank's leadership in the market was nullified by the superior delivery systems that the local banks provided, which therefore enjoyed a competitive advantage over F6. The bank's group had placed Bahrain at the end of the queue with regard introducing new systems or performing enhancements on existing ones. For example, while the bank in Bahrain was waiting to acquire some features of credit card related technology from the group, a sibling bank within the region belonging to the same banking group sold this type of technology to a rival bank in Bahrain.

Although the regional office had reacted to the bank's local requests to upgrade their outmoded telephone-banking system, the proposed new system was not able to match the services offered by the local rivals systems:

> ".. because we are a big organisation, and because we are in a place like Bahrain, we can be right at the end of the line. Because Bahrain is not a very big place ... we don't get the system until near the end of the line which means that some of our main local competitors like Local Four has the flexibility to bring people from outside and design in-house solutions and often very good solutions..".

Defining the local IT solutions:

Local IT affairs were considered as part of the duties of the services department. The bank had had no programmers or analysts working in Bahrain, and if needed they came from the regional office on a temporary basis.

As to the "bread and butter systems" as the TS manager called them, the bank had had no control over what it was getting. The deputy manager said that everything was controlled by the regional office:

> ".. I don't think that this is done here. not in Bahrain. we are not responsible for formulating the IT strategy, we are receiving things from our head office. Anything that they want to give us, be it version 5 or 6, they just dump to us. We can't say anything. Sometimes we have no say in what they give to us.."

Despite its limited autonomy, the bank had had a steering committee in which the top management participated, in addition to the services manager, who was indirectly responsible for the EDP unit, and the TS manager, who was directly in charge of the EDP unit and reported to the services manager. This steering committee discussed any

problems or matters related to users' IT needs, proposals to enhance its efficiency, and any new products that needed IT support. The TS manager was responsible for communicating with either the regional office or the headquarters since their approval was essential for any IT solutions the bank wanted to adopt. It is worth mentioning that the TS unit was not allowed to make any alteration or develop any systems, apart from minor systems that were developed on a stand-alone PCs.

Time horizon for the bank group's IT strategy:

Due to the global nature of the group's IT strategies, their initiation and implementation were long term in nature. For example, the initiation and development of the group's main banking system, "MBS", was done over a 10 year period, while the EFTPoS took 3 years to initiate and another 2 years to implement.

Relationship between business strategies and IT strategies:

Although the relationship between the business strategies and the IT strategies was defined more at the group level, the bank's local business strategies capitalised on the group's IT strategies:

> ".. whatever we do in Bahrain is a subset of what we do in {our head quarter} ... since we are owned by the {group}" TS manager.

There were different phases to the relationship between business strategies and IT strategies. In the first phase, IT strategies were separated from business strategies. A historical case was when the bank first adopted the NCR ledger machine to automate its accounting books. In the second phase, the bank introduced locally networked systems to expand its branch network. This approach was linked to the bank's business needs.

In the third phase, the relationship is at the banking group level. The old main banking system, CIF, had to be scrapped and replaced with a new system, since it was unable to

support the group's business needs. Whenever new business products needed to be introduced, the old system required expensive alteration. Therefore, as mentioned earlier, the new system, MBS, was developed to provide support for potential new products while allowing changes to the main systems.

In the third phase, IT strategies became more integrated with business strategies. The electronic banking system, the trade related system, the treasury system, and the main banking system (MBS) were highly dependent on each other and based on the global data network. The products delivered by these systems were entirely based on IT, without which they would collapse.

> "... With the old CIF system, it required expensive system maintenance and changes whenever there was a new product introduced. This caused the bank to crap the old system and introduce a new system that is more responsive to the business goals in a way that it accepts the introduction of new products with minimal changes to the main system. Other systems related to the bank's business were introduced and integrated to the main system. {Electronic banking}, {treasury system}, {trade system} were the main. Any new business products have to be interfaced with either of these systems. IT strategies and business strategies became more interlinked..
>
> ... I cannot add any products efficiently without looking at the core of my applications and the systems.. any system that I design. I have to look to how it will interact with {MBS}, how it is going to be interfaced with my treasury, and it is going to interface with {electronic banking system}. so the product has to fit everywhere.." TS manager.

Relationship with vendors:

The TS manager said that the vendor played a primary role in providing a reliable and "immunable" platform system:

> "... it is actually quite a primary role, because it is very difficult if you are handling an organisation in the size of {our Group} to make a mistake. You have to have the vehicle to deliver a product ... it sometimes involves studies and hard negotiations with the manufacturers. Initially we identified IBM. It was their system 38 to be the strategic machine. Because it was a database structured. It was more immunable to run a database on it. We did make a study.. and strategically IBM became the winner.
>
> IBM certainly, it has been a strategic partner. It is a global relationship. I can't determine a relationship here. It is determined at the head office level..."

Reliability of the systems and suitability to the group's systems were the features that were sought from the vendor. the group's back bone system, the "MBS" to which all

other modular systems and delivery products were integrated, runs on IBM AS 400. Changing vendors would mean a world wide disruption to the Group's operations.

The bank's relationship with IBM started in 1982, after they had shifted from NCR. Since then, the long term relationship has continued at the head office level.

Role of the TS manager:

The background of the TS manager, who was directly responsible for running the IT scene within the bank, was in communications, electronics, and IT. He gained his banking experience through his work with the bank and was responsible for the EDP, office automation and the electronic banking system. The TS manager and his EDP unit were under the supervision of the services manager.

The TS had the following roles:

1. Advisory and informative role: The TS played an advisory role to the top management through participating in a systems steering committee. He also played an informative role in defining IT related solutions to improve the efficiency or secure a reliable processing of the operations within the bank. For example, he proposed and pressed the management to adopt a disaster recovery system for the bank.

2. Liaison with regional offices and headquarters: The TS manager also communicated local needs to the regional and headquarters offices and sought solutions from the group's IT inventory.

3. Innovator role: The TS manager also played a role as an innovator of ways in which IT could promote efficiency and quality service within the bank, although, on a limited bases. For example, he fostered an IT system that aimed at eliminating the need for

human operators in answering in coming calls by identifying regular callers and connecting them directly to the departments that might serve them best.

4. Responsible for technical infrastructure projects: The TS manager was in charge of any project related to the bank's IT infrastructure.

5. Supportive role: The TS manager's role was more supportive than directive to the bank's business strategies. He had had no voting power in the steering committee.

> ".. sometimes I have to be quiet in these meetings. I try to use them as a platform to tell them what is going on or what the technology has to offer. Sometimes they are interested enough, then they will ask me to pursue things, or sometimes they will tell me to shut up (he laughed). It does not happen actually quite a lot. But mostly all the things that I wanted to do they supported me.." TS manager.

Bank's culture:

Regional office "do the thinking and do the doing":

The TS manager described the bank's group as being the masters of their own fate in terms of using IT world-wide. Whatever they needed, they developed by themselves, depending on their internal resources, the TS manager argued. Moreover, he perceived the group as a world leader in terms of capitalising on IT, a leadership which was enabled by the group's top management commitment.

> ".. the {Group} never bought a second party system, it never went to software houses. I think our motive is to be the master of our destiny"

Despite their global control over their "destiny", the bank in Bahrain was under a tight control from the regional office that gave the branch little autonomy over running its IT scene:

> ".. we are also part of a very large group. We know the market. Sometimes it seems that we lose touch but most of the time we are with the market.. we can't do everything like the [the big local banks]. We have our guidelines and limitations....
>
> .. this concept about the exchange, I have not yet documented it. But as soon the exchange is in, I'll be looking at the software, and as soon as the ISDN is in, I am going to implement it. I will implement it. I will have a lot of opposition in the beginning, because there are certain people in

the regional office who think that they should do the thinking and that they should do the doing. But they have the lack of creative thinking there..." TS manager.

The slow responsiveness and tight control from the regional office caused the bank in Bahrain to lose touch with the local market, as well as to forgo its traditional leadership in some business areas. The process of acquiring additional IT resources from the regional office required political struggle with them. In some cases the branch had to bypass the regional office and refer directly to the headquarters to get support for their required IT resources.

Who runs the IT show? A cultural Gap:

Determining who ran the IT scene was a concern to the informants in the bank. The deputy manager, the retail manager and the services manager, all complained about some of the IT systems that they were using, such as the MIS and the 'MBS'. To quote the deputy manager talking about his problems with the MBS:

> ".. still, I am not getting what I want from my systems. Still I need more, and what I need is not available, but we used to have this in {our old system}. Five years ago we used to have this service.. there are at present very good products that you can buy from the shelf.. but because we are so big we have to build everything within the organisation.. this is why we have the {MBS}... it is done by professionals, by technical people, it was not done by users. That is where we have a conflict between our needs and our technical people.. I don't believe big is good.. sometimes there are some drawbacks.."

The services manager attributed the users' complaints to the bank group's culture, which considered the technical people as being ultimately responsible for running its IT scene. The informant narrated a story about the main banking system, 'MBS', which was designed by the technical people but was unable to meet the users' expectations. He discussed the traditional problems of exceeding the budget and lacking support for additional resources to design the system according to the users' needs:

> ".. one of the problems I have with the {MBS} is that it is designed by technical people, it is not designed by users. Obviously it was written by technical people, and also it was designed by them and I don't think that is right. The technical people put what they think is achievable, and what they think is convenient. It is not necessarily what the users want..
>
> I have seen it with so many projects, they will be designed and written by the technical people. They will have unrealistic time scale, they will not have sufficient resources attached to them, and they will end up cutting corners, this bit cut off and this bit cut off and this bit delayed and eventually you will end up with a system that is nearly half what you want. I don't feel that sufficient resources have been put into it. I know it is costly, but you end up with a far better

system if they poured more resources into the {MBS} earlier, they would have saved money in the long run...".

According to the services manager, each of the two parties, the users and the developers, had incompatible objectives. The users had a long 'wish list', while the technical people were confronted with limited resources. The result was dissatisfaction from the users and possibly delay in achieving the required goals.

Electronic banking system- an IT unit concern:

Although the electronic banking system was mainly directed at the corporate clients, it was not under the responsibility of the corporate banking manager. The TS manager was in direct charge of the system, because of his electronics, communications and IT background. However, he believed that the system needed marketing efforts to promote it in Bahrain rather than technical efforts. From this observation and the above, narrated by the services manager about MBS, it can be inferred that the bank's culture perceived the IT people rather than the business people as being more concerned with directing the IT scene:

> ".. I started as {an electronic banking system} manager... it was actually a mistake on the bank's side when they employed me. They thought that electronic banking had to do with computers... it was marketing.."

Different views between the IT and the business units:

The TS manager said that the limited vision of the business managers worried him. Though, they had an appreciation for IT, their limited vision affected their crucial support for it. This informant narrated how the disaster recovery project, though it was vital to the bank, did not got support from the top management because they were reluctant to spend on the project and wanted to use the group global data network for their backup although this was not technically feasible. The differing concerns and limited technical scope of the top management delayed the project, according to the TS manager.

There was a difference between the technologists and the bankers in the ways of thinking, the TS manager argued. Such differences might affect decisions related to what IT solutions should be adopted and how much would be a justifiable expenditure for it.

EDP as a taboo:

The TS manager was designing a training program to promote IT literacy amongst the users. The aim was to create a state of mind in the users that would help them appreciate the potential role of IT in their work, and enable them to define ways in which IT could automate repetitive work. The TS manager said that he wanted to open up the EDP unit and encourage the users to take the initiative in determining new ways for improving their efficiency. The IT literacy training program aimed at transforming the inherited culture that saw the EDP as an unapproachable taboo:

> ".. whenever there is a manual operation we try to automate it. This is why we are embarking hopefully next year on a PC literacy centre.. it is not meant to teach how to use a PC, but to make them appreciate what PCs can do. We will involve everybody in the bank. The idea, would be 'training through job experience" where everybody would be able to come and play with it, and once they start appreciating what this can do for them, we will come to the ideas of how we can do repetitive things through this.. it will involve the staff through the IT scheme, instead of keeping the EDP as a closed department.. when I took over here it was like a taboo, nobody was allowed to do this. I tried to open it.. involve the people.."

Committees to achieve a mutual understanding:

The informants perceived the committees that they participated in as a means of achieving mutual understanding with regard to their IT needs. The top management including the TS manager, participated in a system steering committee where issues related to the bank's strategies and IT needs were discussed.

Change in CEOs, change in IT support:

The international banking group had a policy to rotate its CEOs every 4 years. The TS manager argued that this policy affected local management support for IT solutions. CEOs may differ in their appreciation of IT and accordingly have different support for

local initiatives. For example, the TS wanted to promote the electronic banking system that he was responsible for marketing by giving PCs to the few major clients in order to encourage them to try out the electronic banking system. With the change in the CEOs, his ideas were shelved.

Problems associated with the IT scene:

Too centralised IT strategy:

There were some drawbacks to the centralised IT strategies that the informants were concerned about. First, their centralised IT strategy affected their responsiveness to initiatives of the local competitors. As mentioned earlier, the bank was the first to introduce systems such as phone banking. However, the local competitors were more capable of introducing systems that delivered a variety of services. Thus, the centralisation of strategy prevented the bank from reacting to its competitors' initiatives.

The lack of autonomy affected the users' satisfaction with regard to the systems they used. Some of the systems were too standardised to meet the users' local needs, but the bank's group was not responsive to changing the global systems to suit the unique requirements of the branches. The deputy manager said that a more liberal IT strategy that gave the bank some autonomy to buy off-the-shelf packages would solve some of its problems.

A third drawback of an overly centralised IT strategy is related to acquiring resources for IT training. The bank in Bahrain had to acquire support from the regional office for running any IT training courses since it had no resources for local training:

> ".. the training for a new system requires a series of courses that need to be run for a period ..
> when we did the training for the {MBS}, it lasted for two months.. the courses were developed
> again in {the regional office}. We don't have any dedicated training staff in Bahrain.."
> Technical Support manager.

Under-resourced TS unit:

The TS unit needed more resources to support the users, according to the retail manager. The unit had plenty to do to meet the users' needs, but it was underresourced in terms of employees:

> ".. The technical support department is underresourced. They are too busy, it is that they have too much on their plates. It is not normally that we can't do something, there is normally no problem that can't be solved. There isn't normally enough people around to help. So really it comes down to lack of resourcing and the fact as a small country we are put at the bottom of the list of priority. We sometimes get things at the end.."

Resistance to change - lack of product champions:

The informants were concerned about achieving a smooth transformation to the newly adopted systems. Furthermore, the users were sceptical about the value of some systems to their work. The deputy manager argued that the lack of competent product champions to market the new systems within the bank might be behind that scepticism to some extent:

> ".. we did not sell it properly, we did not have a good team for it, we gave it only to .. [the informant paused] .. we thought whenever any of these things come from the main office, just give it to a good clerk or good officer to handle it..." Deputy manager.

Moreover, the deputy manager argued that achieving change within the organisation was a concern to them:

> ".. any changes you are doing, create a problem. To initiate any change, it create a problem.. I feel that the major problem that faces any manager now is to face how to manage these problems.. because any change represents a threat to some people, those who perform the job in certain ways and may be of no more use, they will become afraid from losing their jobs and that is why they would make the change difficult for you, you have to prepare people for change, you have to rehabilitate people.." Deputy manager.

Chapter Six

Small Local Banks (Ad Hoc Banks) Case Studies

Introduction:

This chapter includes two case studies of two small banks which were similar in their approach to their IT adoption and strategy formation.

Local Bank One (L1)

Introduction:

Local Bank One (Local 1 or L1) is a joint venture between local and regional investors. The bank's market share of local operations in 1992 was around five percent.

I interviewed the operations manager, who was responsible for different functional areas including the IT scene within the bank. The informant's educational background was in mechanical engineering and he had 20 years of banking experience. He had worked with Standard Chartered Bank in his home country, India, for 13 years after which he joined Local 1. The interview was tape recorded.

Business focus:

Local 1 started its operations in the mid-eighties. At that time it focused on the interbank market and developed a portfolio of fixed and floating rate of international notes and bonds. However, the bank was not successful in this type of business. In the late eighties, it reported a loss, followed thereafter by a change in its top management.

With the change in top management, the bank changed its business focus from investing in the interbank market to traditional commercial banking business within the local market. Due to its previous negative experience in the investment business, the bank avoided entering into business areas in which they did not have expertise. They became followers rather than leaders, the informant stressed.

The informant did not indicate a clear segmentation of their market. However, he mentioned that they were offering a variety of liability and asset products, and were involved in routine, unsophisticated treasury investments:

> ".. our bank is not focusing into some of the newer products that came into the market.. we are certainly covering the whole range of liability side of products, covering the assets side of products. On the treasury side we decided that we are not equipped to handling the fancy derivative type of products. In treasury market we are dealing with the more basic routine. The systems that we got is adequate and geared for handling that entire range of products and services..."

Perceived role of IT:

IT is essential for the bank's operations:

One of the main tasks that the new management team accomplished when they came into office was scrapping the bank's old system and replacing it with a new system. The old system was not reliable in terms of its accuracy and needed a lot of manual intervention.

The new system aimed at automating the bank's operations with minimal human intervention. Accuracy and reliability of processing, security against fraud, and flexibility in disclosing information from the different sites within the bank were some of the crucial goals that the new system was expected to meet. The operations manager perceived that their success as a bank depended on how efficiently the proposed system was able to handle their internal operations.

> ".. everything is really IT driven... the whole structuring is around a suitable IT packages that is available. Reliability is of our concern. Obviously, because it is others' people money that you are dealing with. So you have to be absolutely certain that whatever you are doing is hundred percent correct, and most important thing is the security aspect, confidentiality and security that can't be tampered with. So you have to have a system which provide you both of those two things. It has to be flexible enough for the people to do certain inquiries to carry out their normal daily transactions...."

IT enables redesign of the bank's processes:

The new application systems were perceived as a means of redesigning the bank's processes to enhance efficiency:

> ".. we are changing things around which we will change the way that we drive our business processes... that is really going to affect us between now and the time when we have the new system integrated..."

Internal capitalisation on IT enables business plans and improves quality of service:

IT was perceived to play a crucial role internally by automating, both to the back office operations, the front office operations. The aim was to enable the bank to provide a variety of products and improve the quality of service. The products that the informant mentioned were traditional commercial banking services.

Match the competition:

IT was perceived as a tool for matching the competition. The ATMs were introduced as a means of matching the competitors. The introduction of products, such as credit cards were also in the bank's plans to match their competitors:

> ".. it is our strategy now to go for these side products which are not your basic bread earner, but to keep you in the business to match the competition..."

Essential for the bank's image:

The operations manager also mentioned that the availability of some IT systems or related products was linked to the bank's image and, despite their cost or expected return, had to be adopted to protect or create a favourable image.

A homogeneous market: all are providing more or less the same thing:

The informant perceived IT as being used by all banks in a similar way. Similar technologies and products were provided, although enhancements were offered by some banks. However, the market was homogeneous in terms of what it provided and how it used IT, the informant argued:

> "Q. How this bank is different from other banks in terms of using IT?
>
> Operations manager: I don't think that it is different. I think that all banks are basically doing the same thing..... if you go to all of the banks and collect all the products that they have, I don't think that there is any bank in the Island today which is offering anything which the other banks are not. OK some banks are possibly offering a little bit more in terms of, like, ATM link and VISA Cards.. L4 have it, F6 have it world wide within their banks.. but if you look at the kind of current account or the saving account or fixed deposit accounts, the normal retail functions, the customer loans, or the property loans, all the banks are doing the same thing. You call it a different name, but the product remains the same...."

Main IT developments:

The bank started its operations with a mainframe system and in-house developed application systems. According to the informant, the old system was not reliable in terms of its processing accuracy and it needed a lot of manual intervention. The hardware and the software cost the bank a fortune, but failed to meet their objectives.

With the change in top management came a change in the business strategies and focus and also a change in the bank's old system. The new management had to scrap the old system and adopt a new one. However, they were restricted in terms of expertise and financial commitment devoted for this task.

The bank's new system was mainly based on off-the-shelf packages, as they did not have the resources to develop any in-house systems. Moreover, they were offering traditional banking services that most of the off-the-shelf packages were designed to provide. The operations manager identified an Irish company, Kindle, and its software system, "Bank Master" as being their strategic partners.

The Kindle systems were designed on an open system concept that allowed them to run on different IT platforms. The 'Bank Master' was designed to run on mainframes and PC environments alike.

The bank opted for an open systems architecture. They wanted to be free from the influence of the hardware vendors who directed the client in one direction or another as to what system to adopt, according to the operations manager. He also mentioned that most of the banks were on a mainframe system, thus were forced from time to time to migrate to the next model of the vendors' series as it was developed. Because this process was costly, L1 wanted to avoid such costs by opting for an open, downsized system.

The operations manager perceived the downsized PC environment, based on a LAN and 'client server' technology, as being the trend in IT infrastructure. The cost of adopting a downsized infrastructure was lower than that of adopting a mainframe infrastructure. Given the small size of the bank and the limited resources the operations manager was supported with, he recommended the downsized environment.

The downsized environment, the operations manager argued, enabled the bank to start with systems that fit its requirements and avoid paying for systems with extra capacity that was not needed. Using PCs and file servers enabled the bank to upgrade its systems at a minimal cost.

The bank had started with a single office, then expanded by opening three additional branches after 1990. With the expansion, the bank embarked on renewing its LAN network, PCs, and file servers to enhance their processing capabilities. Moreover, the bank introduced another software system from Kindle company called 'Branch Power' to enable networking of the branches as well as providing traditional banking services, such as printing drafts, signature verification at the counter, remote authorisation, etc.

In 1992, the bank introduced its ATMs. The bank was among the second wave of smaller banks that offered their systems simultaneously. Recently, the bank had been in the process of upgrading its ATMs by providing more enhanced ATMs with coloured graphics. It got a 'bargain' price for this upgrading from the vendor, who encouraged the bank to scrap the old ATMs and install new ones instead.

The bank was also embarking on front office automation to improve the quality of its service and to cope with the increase in the number of its client base. Moreover, the bank was planning to re-launch its credit cards, after stopping offering them for a time.

Reasons for embarking on the IT initiatives:

There were several interrelated drivers to IT initiatives. The first driver is related to automating the bank's core operations and delivering the basic banking services and products upon which the bank depended to earn its revenue. The 'Bank Master' and 'Branch Power' systems aimed at automating the bank's core banking operations. including accounting books and business processes, as well as producing required reports for internal and external uses. The failure of the old system to handle the bank's operations and produce the required reports necessitated scrapping it to embark on the new system.

The second driver for adopting the 'Branch Power' system, was to enable the bank to achieve its business goal of expanding its branch network.

The third driver for automation was to enhance the quality of services to customers. As mentioned earlier, 'Branch Power' aimed at networking the branches and automating the banking processes such as printing drafts, verifying signatures at the counter, enabling remote authorisation, etc. The aim of automating these processes, as the informant said was to reduce the queues at the bank's counters and provide prompt, 'one-window stop' service to the customer from whatever branch the client opted to bank from.

A fourth driver for IT initiatives was related to the increase in the number of transactions and customer base. The operations manager mentioned that the bank was embarking on upgrading its workstations and PCs to provide faster processing to cope with the increase in the business processes.

A fifth driver of IT initiatives was related to conforming to the norms within the banking industry through adopting the IT related products and systems that were perceived as being a competitive necessity or crucial for the bank's image. The operations manager mentioned that, in reasoning with the board of directors, what the other banks offered in the market was used as the benchmark against which the bank's IT stance was evaluated, in order to seek the board's support to reach the same level as the bank's rivals.

> ".. so you tell them (the informant talking about the board of directors) that this is what the other banks are doing, this is what the competition is doing, these are the products that they are giving, here's where we stand to them. These are the customers that approached us and asked about why we are not offering these things. So you think in terms of these things then get support.."

> ".. you have a hundred and fifty thousand people. You spend one or two million dollars to bring something over a period of five years or ten years.. from that point of view it does not make any sense at all. But it makes sense of your corporate image. Cards.. we were processing Master Cards over here, we gave it up because it did not make any sense, we were losing money on that. If not losing money, we are not doing any money on that, and yet we want to go back into issuing our own cards. Why! Business wise it is not going to make any fantastic sums of money for me but it is a corporate image. I need to have my card out in the market. Because everybody else has his card in the market... even if I linked it with Visa, how many of my customers are going abroad and use the Visa connection. Mostly it is going to be used over here. For that my ATM cards and EFTPoS in the proposed network will suffice, and I will be happy. I don't have to sign up with Visa. Because I have to pay them fees. to give them interchange commission every time I do a transaction with them. But still I must do all that because I must be linked to a big name... it

is not just technology.. sometimes you don't want certain thing but you are forced into doing them. You have to go along with them..".
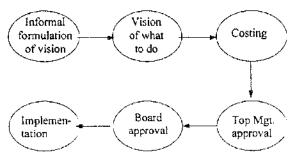
The sixth driver was related to the vendor, rather than the business processes or requirements. The vendor offered the bank a bargain price to encourage the bank to scrap their old ATMs and install new coloured ATMs instead. According to the operations manager, the new ATMs had had no functional advantage, apart from their looks:

> "There is a big company over here who are trying to discourage one particular brand of ATMs, because they are no longer being manufactured, they are obsolete technology. Although of their contract with us or with other banks they are forced to continue to service that particular technology until we decide to scrap it. But it is to their interest to make sure that we scrap it as quickly as possible by offering something new. So they are offering the latest technology at a very attractive price. They will say replace your old models we will give you this at this price because it is beneficial to them...

> .... the coloured ATMs enhancements. You have now coloured enhancements, which don't really serve any purpose except to attract the customer. Other than that they don't really help the customer or any thing (he laughed). Just another thing that makes it attractive."

IT strategy:

The formulation of IT strategy proceeds through a number of stages, according to the description of the operations manager (see Figure 1). In the first stage, the operations manager, who is the product champion of any IT initiative, formulates a vision of the IT strategy needed in the bank. Once this vision is clear to the

Figure 1: Formulation of IT strategy at Local 1
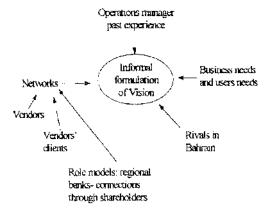
operations manager, the second stage starts, in which the operations manager prepares a cost analysis of the proposed strategy and presents it to the top management. As a

product champion of the proposed strategy, the operations manager's duty was to convince the top management, who in some cases accused him of representing the vendors' interests, of his visionary ideas and strategies. Once approved by the top management, the IT strategy, especially when a substantial amount of investment was involved, was presented to the board of directors for approval. The operations manager plays an important role in this process through defending his vision before the board. This process requires political skills to overcome top management resistance to spending. Once approved by the board, these strategies are implemented.

The operations manager said that the formation of IT strategy was informal because the bank was small in its size and because, he, who directed the IT scene within the bank, was responsible for different functional areas and was therefore aware of the bank's requirements:

> ".. being a small bank, it is largely informal process. The informal process starts at looking at all levels to see what the competition is up to.. what we need to do, what are the things that we see outside.."

There were different sources that influenced the formation of the operations manager's vision (see Figure 2). The first source of vision of the IT strategy was the operations manager's past experience. His work experience with Standard Chartered Bank in India had exposed him to how IT could serve him, what systems to adopt and how to implement them.

Figure 2 : Sources of IT strategy vision

The second source of vision for IT strategies came from the bank's business needs and user needs. Through contacts with the employees and the business managers, and through the top management steering committee in which the business managers define their business needs, the vision of what IT systems were needed came about. Moreover, through his day to day experience with the bank's operations, the operations manager defined the problematic areas that needed IT support.

The third important source of vision came from what the bank's rivals were offering to their clients:

> ".. my retail banking manager or my branch managers might come to me and say: Look, this is what we have heard, this is what we have seen the other banks' are offering. For instance when we did not have the ATMs, all of our customers were saying: 'why you did not have an ATM, all of the other banks where having an ATM... why don't we issue an ATM cards'.... people are not coming to us because they say .... {we} want to withdraw money on {the week ends} your bank is closed, while the other banks are giving this service. we need an ATM. Then people have started coming and saying: 'why don't you issue cards, everybody is issuing Visa and Mastercards.. why aren't you issuing'.. this is something that we started looking at, and this is something that we need to do.."

The fourth source of vision came from networking with the vendors, the vendors' clients, and other banks in the region which acted as a role models to the bank, as the operations manager described. As for the vendors, the operations manager had developed a personal and official relationship with Kindle. Through exposure to the software vendor's systems he defined what to adopt. The vendor's systems were directing the IT strategy, since the bank IT strategy depended on off-the-shelf packages:

> ".. everything is really IT driven.. your management information systems and what you want out of those systems.. the whole structuring is around a suitable IT package that is being available.."

> ".. I see something, I have seen the front office system. I like what I have seen. I see that the turnaround at the counter has decreased drastically .. [the informant was describing what other banks were doing]. I come here and I ask for a product demonstration. I involve my branch managers, my retail banking manger, my corporate banking manager.."

Moreover, the relationship with the hardware vendor was a source of vision about the downsized environment which the hardware vendor was breaching in the Bahraini market.

An additional source of vision for IT strategies came from the relationship of the operations manager with the vendors' clients. Through informal contacts with the vendors' clients, the operations manager was exposed to their systems and plans about what technologies to adopt and how to adopt them.

> ".. what we tend to do was to approach informally some of the other users of the Kindle software and discuss with them how they have done things or they are planning to do things but it is informal.."

Another source for creating a vision about IT strategies came from contacts with other regional banks who were perceived as being pioneers in using IT. The operations manager mentioned 'Gulf American Bank' (pseudonym) as a role model that the bank followed with regard to what to adopt. I noticed that Local 1 and 'Gulf American Bank' had shareholders from the same regional country that invested in both banks. It was possible that the collaboration between Local 1, which is a joint venture between local investors and Gulf investors, and 'Gulf American Bank' was made possible due to networks of shareholders and board of directors.

> ".. I think that the very fact that we have seen what is happening outside and how our customers get influenced by what the competition and what the other banks can provide them. Not necessarily banks in Bahrain, but I am talking also world wide. Therefore our attention was focused on {Gulf American Bank}, for instance, who provide excellent customer services. There entire IT is designed towards gathering customer information, and tailoring their products and services to meet the expectations of the customers. Obviously we have not got to that stage over here. But using other role models as a guide, we are trying to see how best, within the framework that we have, how best we can provide the kind of services which our customers are used to perceiving over here.... we feel we are the first bank in Bahrain to have such elaborate front office system which nobody else has.."

The bank's IT strategies were influenced by the amount of resources the board was willing to invest. Historically, the bank had focused its IT strategy on building the internal IT infrastructure based on a downsized environment to automate the main core banking operations. At this stage, the bank avoided adopting any delivery systems, such as ATMs, or IT-related products, such as credit cards. The reason was the high risk perceived from handling a relatively big project with the limited expertise available at that time. The operations manager said that the bank did not want to go into adopting the ATMs and related communication systems before finishing automating their core banking operations and being sure that it was running properly. Moreover, the bank

avoided adopting credit cards because at that stage they did not have the required expertise to handle that kind of business. At the second stage, the IT strategy was directed more at adopting delivery systems, such as ATMs and credit cards. According to the operations manager:

> "It was part of our strategy at that point of time to ignore these services completely... there was nobody who could handle card processing. We did not have the technology for it... So what it would have meant at that point of time is .. while we were trying to get our core business in place, but we also started to look for somebody to start looking at the card business, to start looking at EFTPoS devices, to bring in systems that don't have to do just our basic interest calculations, debit and credit, but also link up to all kind of things, communications, we would have to go for substantial communication set up.. we would have to go for a software designed to handling all of these things separately and talking to each other. So in terms of the human resources we did not have this kind of human resources. In terms of financial resources we did not want to .. we were going into a phase where the bank had been into operations for three years, had not produced the kind of profits that the shareholders wanted.."

Time horizon of the IT strategy:

The time horizon for the IT strategy was between 2 to 4 years. The relatively cheaper IT infrastructure of the downsized environment enabled the bank to upgrade or enhance its IT platforms to cope with expansion strategies or increased transactions and client base in a shorter time than in a mainframe environment, the operations manager argued.

The informant also argued that the bank's IT strategy was guided by its business strategies. The core business was not expected to change, so the IT systems were expected to deliver the same products over the long run with minor enhancements from time to time.

Relationship with the vendors:

Relationship with the software vendor:

The relationship with the software vendor was strategic in its nature, strategic because the bank's entire application systems were based on Kindle systems, as mentioned

earlier: the 'Bank Master' and the 'Branch Power' systems. Kindle future developments and enhancements were expected to influence and inform the bank's strategic vision since the bank's vision was based on the off-the-shelf packages developed by Kindle.

Local 1 was the first bank in the Gulf to adopt Kindle software systems. The vendor did not have any representative offices in Bahrain, nor elsewhere in the Gulf. Nonetheless, the vendor offered to fly a team of experts to Bahrain, should the bank need any support in implementing the software system. The operations manager said that the software vendor handled them quite well and was very interested in setting an exemplar to other banks in the region through its success with Local 1.

The operations manager stated the relationship with Kindle grew on both the personal and official levels.

The software vendor was also a source of relationship amongst the vendor clients. As mentioned earlier, the bank approached the vendor's clients in order to gain ideas which influenced its IT strategies.

The operations manager, as the product champion of the IT strategy, was the link with the vendor. Prior to serving L1, the operations manager had worked in India with Standard Chartered Bank which was dealing with Kindle at that time. This exposed the operations manager to the software vendor and its systems.

The Kindle story:

Kindle is an Irish software company that started operations in the seventies and is strategically linked to ICL, a company for whose mainframes it created banking application systems.

Kindle systems and ICL mainframes were popular in markets that IBM, due to political or other reasons, was restricted from entering. The operations manager mentioned

African countries such as Zimbabwe, Gambia, Ghana, as well as India, as some of the markets where IBM was not present.

In India, the majority of the banks ran on ICL mainframe computers and their software application the 'Bank Master' that Kindle had developed. Standard Chartered Bank was among these banks that opted for ICL and Kindle systems. As mentioned earlier, the operations manager had worked with Standard Chartered Bank in India, where he was exposed to Kindle software.

Kindle changed its strategy from developing application systems mainly to ICL mainframes to developing application software to any major hardware platform. It went one step further where it made two versions of its applications, one running on a PC-LAN environment and the other running on the mainframe environment. This strategic decision, according to the operations manager, made Kindle amongst the popular banking application software vendors world-wide.

Relationship with the hardware vendor:

The hardware vendor was the representative agent of Compaq computers and Oracle relational database systems. The hardware vendor was a source of vision for the bank with ideas related to networking, relational database systems and the downsized environment. The relationship with the hardware vendor was of a long term nature and was based on mutual trust. According to the operations manager:

> .... We went to a company that was at that time relatively small, they wanted to find a niche to themselves, and we were their first major break in terms of feasibility in the market. And suddenly they were attached to a bank, and the bank was placing orders with them for file savers, for work stations, for everything. They have grown substantially since that time. So they are the ones that say thank you to us, and we have found that they have been excellent. In fact we are now looking again for placing orders for certain things and they are certainly ahead in terms of placing orders.. Because we feel that we know them well, we have a very strong relationship....

Role of the operations manager in IT strategy formation:

Main product champion:

The operations manager was the main product champion behind the IT strategic vision and its implementation within the bank. As described earlier, the operations manager was the main source of vision about what to adopt and how to structure the IT scene within the bank. According to the informant's account, he played multiple roles within the bank and was responsible for a number of functional areas, including the IT scene, mainly due to the small size of the bank.

> "Q. Are you the product champion?"
>
> Operations manager: "Yes, I am. Sometimes I am accused for being the salesperson for the hardware and the software vendors, because I have to be convinced that whatever I am going for is the best. So when a question is thrown at me and I have to defend the products, it sounds like I am the sales person of the company trying to convince my fellow of why this product is the best. So, you can say that I am the product champion.."

Previous job with Standard Chartered Bank exposed him to systems and vendors:

Previous work experience as a source of competence:

The operations manager's previous work experience with Standard Chartered Bank in India was a major source of vision for his current position with L1. His previous work experience had exposed him to systems, provided him with expertise as how the systems could serve him, and how to implement these systems, despite his non-IT related educational background. With Standard Chartered Bank in India, the operations manager was responsible for implementing Kindle systems in his branch. According to the operations manager, he was comfortable with implementing the Kindle systems in the bank in Bahrain without any help from the vendor nor any third party. This competence was gained from his Standard Chartered Bank experience.

"..the first branch in India of Standard Chartered Bank that was computerised was in New Delhi and I handled that. I am not a technical expert in the computer field, I have not done a computer training course or programming or something, but from a banking perspective, how a computer system work, what do we need from a computer system, how to set it up, those are the things that I can supervise, I can control and manage.."

Relationship between business strategies and IT strategies:

The operations manager argued that the IT strategies were mainly directed by the business goals. However, IT was mainly used for supporting the traditional banking activities rather than innovating. The business strategies avoided going into sophisticated business areas, such as derivative products in the treasury market, and preferred the "more basic routine" business, as the operations manager described it, and this was reflected in the bank's IT systems. For example, IT was used for handling expansion strategies and providing the basic banking services.

The bank's culture:

A revolutionary change:

The bank experienced a revolutionary change in its top management and its strategies. The bank had started with a foreign top management team who focused on investing in international notes and bonds and paid little attention to the local market. The bank experienced sharp losses from its international investment portfolio. In addition to that, the bank had failed to establish a business niche capitalising on the trade flow between Bahrain and the regional country with which the joint venture was made. This was a vision that the bank had had at the outset of its establishment but failed to achieve.

Following the bank's losses, the bank experienced revolutionary changes in its top management and consequently, in its strategies. The revolutionary changes shifted the

bank's focus from interbank investments to traditional commercial banking business that focused more on the local market and avoided investing in sophisticated treasury business.

The previous negative experience had made the bank's board of directors cautious about adopting strategies that deviated from what others were doing in the market, so the bank opted for following in the market rather than leading.

New top management influenced by Standard Chartered Bank:

The new top management were made up of locals as well as foreigners. Half of the new management had past experience working with Standard Chartered Bank, either in Bahrain or abroad. This exposure influenced how the bank handled its IT scene.

Previous experience and spending on IT:

The IT systems that the old management had adopted were unreliable and inaccurate and had to be scrapped when the new management came into power. The old systems cost a lot but delivered nothing. As a result, the board of directors had lost faith in spending on IT, and gave little support to ideas that called for high spending on the bank's IT systems.

The mandate of the new management was to create a new and reliable systems at a minimal cost to the bank. They expected little support, if any, from the board of directors for any costly plans. They were under pressure to create profits prior to requesting financial support for new systems.

> ".. we were going into a phase where the bank had been into operations for three years, had not produced the kind of profits that the shareholders wanted. So it was very difficult for the new management team to come in and say hi guys, we are the new magicians, forget about what happened in the past , but because we tell you we are the best, believe us, and we will spend ten million dollars and we will give you a lot whole of things. The shareholders would have said. 'hold on, who the hell are you! How different are you from the other guys, put your money where your mouth is, show us the results and we will start talking to you'..."

The small cautious bank:

The operations manager perceived that their being a small player in the market with limited resources affected how they approached adopting IT. They were cautious as to how much they were going to invest in IT.

Play it safe:

The bank avoided innovating within the market. The informant preferred that other banks try new strategies first and then Local 1 would evaluate them and follow when appropriate. The bank's previous failure might be behind its board of directors' conservative approach to innovating in the market. As the operations manager put it:

> "... I think that we are certainly not driven by technology. We are not going to be a market leader in technology. We adapt and we accept and we review and then go for things. But if you say, 'lets' look at new products and let's implement it and let's do it before anybody else'... it has not happened so far.... It is more of a question what the other banks are doing, let's go and do it.. are you sure that this will work? no. Let's wait and see what the others are doing. Then we will do it. I think that we are over-cautious.. and also given our size and overall direction, the market segment that we are targeting, I think it is counter productive for somebody like us. We can't afford to waste money.. we can't afford to put too much money in R&D. I don't think that we have that kind of resources, that is the real lesson. If we had that kind of resources perhaps our perception would change and we would have gone for technology.."

Local Bank Two (L2)

Introduction:

Local Bank Two (Local Two) is a joint venture between a number of private and public investors in Bahrain and other regional investors from the Gulf. The bank participated in creating other subsidiary financial companies within Bahrain and within the Gulf region, but its major operations were carried out locally, with its local market share estimated in 1992 to be around six percent of the total local operations.

I interviewed three informants within the bank. The first meeting was with the deputy manager and the EDP manager. Since the informants were not comfortable with being recorded, I had to take notes instead. I was planning to interview each manager separately. However, they attended the meeting together, which made it hard for the EDP manager to air his views in the presence of his superior. At a second meeting, I managed to interview the EDP manager alone so he was more free to express his views. That meeting was informal and I depended on taking note. The third interview was with the general manager. The aim of this interview was to further investigate the process of IT strategy and business strategy formation at the bank and to inquire about his role in this process, as I did not get clear answers from the deputy manager about these issues. Though the meeting was tape recorded, the informant was not comfortable with being recorded so he was very cautious about what he said, providing general statements rather than discussing his experience.

Business Focus:

Operating differently than the conventional banks:

Local Two operates differently from the conventional banks. It follows 'Islamic banking' processes. According to these principles, loans are not bought and sold, and interest charges are not approved, the deputy manager explained. Local Two therefore accepts deposits from the public, who are considered as partners with the bank in sharing either the profits or (theoretically) the losses that may occur from the bank's activities.

Local Two concentrates on Murabaha business (financing resale of goods)[1]. It focuses on two segments for this type of business. The first segment is the public, with special attention paid to employees, who are classified by the bank as being "limited income clients". This segment includes public sector employees who are of middle or low income. The second segment includes the traders and the merchants who own small to medium size businesses. The GM explained that the bank aimed to spread its risk by focusing on the wide range of customers within these segments.

An overbanked environment; however they don't compete on a price basis:

The GM perceived the banking industry as being overbanked and with limited business opportunities considering the number of participants in the market. Nonetheless, the GM argued that their strategy did not focus on providing the lowest price in the market. He perceived their bank as enjoying a niche that conventional banks could not easily target. There was, however, a second Islamic bank that had entered recently the market which formed a competitive threat to Local Two in many business areas. However, the newcomer to the market did not focus on serving the mass "limited income clients" as did Local Two. Despite the distinction in operating principles, the bank competed with

---

[1] See the appendix for a description of the Islamic financing business.

the conventional banks in financing the same kind of commodities, e.g. cars, merchandise, real estate, etc.

Perceived role of IT:

Crucial for the bank's operations:

The deputy manager perceived IT as crucial for the bank's operations. He used an analogy where he compared using IT for automating the back office operations as "using a gas cooker after they had been cooking on wood".

Garish systems versus core systems:

The deputy manager distinguished however between what he described as 'garish' systems and core or 'must' systems. As to the 'garish' system, the bank was conservative in its spending on these systems. On the other hand, it perceived adopting the core systems as essential, transforming the bank from 'cooking on wood' to 'cooking on gas', to paraphrase the informant. It was not clear which systems were perceived by the informant as being 'garish' and which were a 'must'. It is worth mentioning that their existing systems were in operations for a long time and suffered from some efficiency problems.

"Vogue": the others are offering it, we should too:

IT played another role in conforming to the norms within the industry. The deputy manager described the adoption of IT systems as a 'vogue' amongst the banks, like the satellite systems and the 'luxurious cars' that people in Bahrain were rushing to acquire. though there was no real need for them. Telephone banking was the example that the informant gave. He perceived the adoption of this system as a means to conform to the

norms or the 'vogue' within the market, rather than enhancing efficiency within the bank.

Meeting the central bank requirements:

Another role ascribed to IT was to meet the central bank's requirements. The adoption of the encoding devices within the bank was enforced by the central bank, mainly to automate the cheque clearing system at the central bank. The adoption of the encoding system did not have any effect on the bank's efficiency, other than adding another manual procedure of feeding the cheques to the encoding machine and keying in the needed data for printing on the cheques with a magnetic ink. The bank did not alter its systems to automate the processes that followed receiving the cleared cheques from the central bank.

A competitive necessity:

IT was also being perceived as a defensive measure to protect the bank's client base. This was especially true for the bank's ATM systems. ATMs were adopted mainly to match the competitors and be in line with banks that were similar in size and strength to Local Two.

More important role for the products on the liability side and a marginalized role for products on the asset side:

As mentioned above, the ATMs were perceived as being a competitive necessity to the bank. The deputy manager added that these systems affected the marketing of products on the liability side, such as deposit accounts. Without the ATMs, the bank's market share in terms of deposit accounts was expected to suffer.

In contrast to that, the deputy manager perceived a minor role, if any, for IT in marketing or protecting products on the assets side, the 'Islamic finance'.

MIS important for decision making:

The general manager explained that IT played an important role in providing the management with the needed data necessary to take educated decisions. It was not clear, however, how sophisticated their MIS system was. To support his argument of how important their MIS was to their decision making, the GM showed me a hand written table of numbers, stating that the data included in it provided him with an insight into what decisions to take. I inferred from the fact that the report was hand-written that their MIS system might not be sophisticated enough to produce the required information without manual intervention.

Main IT developments:

The bank automated its accounting records in 1984. In addition to that, it incrementally automated the bits and pieces of its manual processes. The following is a list of the main IT initiatives as reported by the deputy and EDP managers:

- automation of the accounting records in 1984;

- storing the customers' signature images on the computer and making them available to the tellers for the front office operations;

- automating printouts of saving accounts;

- automating the printouts of the 'Islamic finance' checks;

- automating the printouts of the investment certificates;

- introduction of a backup system;

- increasing the systems storage capacity. The aim was to store the transactions details for one year as compared to six months, as was the case at rival banks;

- linking the branches on-line with the head office;

- introduction of ATMs in 1992 - 1993; and

- introducing phone banking in 1995

There were plans to automate the letters of credit and letters of guarantee within the bank. The deputy manager perceived that this was the trend in Bahrain, since many of the other banks were in the process of automating these processes. There were additional plans to upgrade the bank's ATMs, since the bank had been offered lower prices for this from the vendor.

It is worth mentioning that the informants gave no reference to redesigning their processes as they were automated. Instead, their approach focused on automating the bits and pieces of these processes, such as developing mini-application programs to print investment certificates, which had previously been printed by the type writers, and to print the 'Islamic finance' cheques, which were previously made out manually.

The bank's IT developments were constrained by the capabilities of the current hardware system, which had been in operation for a long period of time. These systems, as will be discussed later, handicapped the bank from linking itself to its subsidiary insurance company.

IT strategies:

In-house development of systems:

The EDP manager said that the core banking systems were developed in-house rather than acquired "off-the-shelf". The informant said that due to the unique operations of the Islamic banks, there were no "off-the-shelf" packages offered in the market from which these banks could select. Thus, developing their own systems rather than depending on "off-the-shelf" packages was a phenomenon unique to the Islamic banks.

Collaborating with other institutions for developing the main application system:

The bank was aided by another Islamic bank, "Gulf Islamic Bank" (pseudonym), in providing the required guidance about what application systems the bank needed to run its core operations. This Islamic bank was one of the share holders of Local Two.

The in-house development of the application systems was made possible by collaborating with the vendor company, which was a subsidiary of "Gulf Islamic Bank". This vendor aided other Islamic banks in the Gulf in developing their systems.

The vendor was also a source of recruits to the bank. For example, the EDP manager, who worked on developing systems for other Islamic banks, was recruited from the same vendor.

Lack of adequate support from the consultants and the vendors:

Despite the vendor's support to the bank, the EDP manager aired his concerns about the lack of adequate support from the software and hardware vendors and the consultants in the local market. He claimed that they were not experts in how the Islamic banks operate and therefore were not able to guide them in their adoption decisions. The EDP

manager stressed the need for a vendor's guidance as to what the implications of IT are to a bank's business rather than what pieces of a system to acquire.

Small EDP section, priority to the back office automation:

Later developments and enhancements within the IT scene in the bank were done through the bank's EDP section. The section was headed by the EDP manager who supervised one employee. In addition to running the day to day operations, the duty of the section was to develop application systems, some of which systems were minor in nature. As mentioned in the main development sections, some of the application systems were concerned with printing records that had previously been printed manually. The EDP manager said that due to the under-resourced section, automating the manual processes took a long to accomplish.

Role of the EDP manager:

The EDP manager was recruited from the same vendor from whom the bank had acquired its hardware system. He had gained his experience developing application systems for the Islamic banks during his previous job with the vendor. This experience aided him in developing the in-house systems. Nonetheless, he did not have power over nor influence in running the IT scene within the bank. He claimed that his role was restricted to providing recommendations to management when required.

The formation of IT strategies:

The informants did not answer my questions about how the bank formulated its IT strategies, the processes that they went through for adopting their ATM and phone banking systems, or who was responsible for formulating these strategies.

I infer from the informant lack of response that there were no formal IT strategies for the bank. The informants stated that they depended on their internal resources to develop their systems. As mentioned earlier, their internal resources were made up of a small

EDP section with two employees who were overloaded with responsibilities of running the operations and developing new systems. It makes sense to assume that due, to the work overload and the limited expertise and human resources within the EDP section, the bank's informal IT strategies were mostly concerned with minor and incremental enhancements to the manual systems such as automating the printing out of investment certificates and loan cheques. Some of these developments were not integrated with the rest of the main systems.

Committees for major investments in IT:

The deputy manager claimed that the bank formulated committees for discussing any major investments in IT projects in which the GM, the deputy manager and nominated members of the board of directors participated.

Relation between business strategies and IT strategies:

I presented to the GM a graph describing hypothetical relationships between a bank's IT strategies and business strategies. In the first type of relationship, the business strategies and IT strategies were totally independent of each other. In the second type of relationship, the business strategies capitalised on the IT strategies. In the third type of relationship, the distinction between business strategies and IT strategies was blurred and the two strategies were almost overlapping.

Unexpectedly, the GM claimed that his bank IT strategies and business strategies belonged to the third type of relationship where the business strategies and the IT strategies were overlapping and the distinction between them was blurred. This contradicted the views of the EDP manager who claimed that the bank's focus was on automating the manual operations within the bank, which had little to do with the bank's competitive strategies. The GM's views also contradicted the deputy manager's views

in which the later argued that IT played a minor role in developing the asset side products on which they depended to generate their revenue. In contrary, the GM perceived that an advanced relationship between IT and business existed in the bank. This argument was made despite the nature of IT systems the bank developed, the limited resources the IT unit had, and the limited power of the IT manager.

There was a shift in the bank's advertising approach. Their advertising messages had focused on the ethical issues of 'Islamic' banking. However, recently the bank's advertising messages were focusing on presenting the bank as an integrated bank which capitalises on IT to enable its clients to bank through any of its branches. It is worth mentioning that the other local banks were featuring their IT related services in their advertising campaigns as well.

Bank's culture:

A market niche serving the "limited income clients"

The GM claimed that the bank was the first to target the "limited income clients" who formed a big slice of the employees' market. The bank perceived itself as having a monopoly in the Islamic banking business, since there were no other institutions competing directly with it in providing finance facilities which conform to Islamic principles.

The GM perceived the ATMs as a threat to their business. He anticipated that the availability of these machines would encourage the clients who were mostly of a "limited income" to withdraw their salaries and end up with zero balances at the beginning of the month. Such an effect was not desirable, since it would leave the bank with less deposits. The GM's belief about the effect of the ATMs discouraged the bank from adopting the ATMs any earlier than 1992-1993. Only when close competitors adopted their ATMs did Local Two follow suit.

There were other IT related-products, such as credit cards, that the bank resisted offering because of how it perceived the client base. The culture of the bank was shaped around offering the basic needs of the 'limited income' clients. Quality of service was not part of this culture.

Conservative "cool temper" management:

The bank's management was conservative in its spending on IT. The deputy manager described the bank as being different from the other banks which were more aggressive in their adoption decisions. He told a story about a rival bank that did not take its time in evaluating the available options and ended up scraping its system and buying another one later on. The deputy manager said that they did not want to rush in taking decisions that they might regret later on. He described their management as having a 'cool temper' that resisted temptation. He mentioned that they waited for two years before adopting their core banking system, and once these systems were in operation they were used for a long period of time. He mentioned that they had some hardware systems in operation since they adopted their first IT system.

It is worth noting from the example that the deputy manager gave above how the bank's management perceived the high risk of adopting IT. The management were more sensitive to negative experiences using IT in the industry, rather than the positive experiences in the local market.

It seemed that their cautious approach to IT characterised their overall behaviour. The GM mentioned that they were unlike the main two local banks who rush and compete with each other and change their strategies very frequently. Local Two reacted only when there was major pressure in the market that necessitated a response, according to the GM. The bank's conservative approach might also reflect its escape from bad debts and loss problems that many of the local banks suffered during the early eighties, due to their lending behaviour.

The EDP manager contrasted the bank's management with that of another Islamic bank that was more aggressive in its spending on IT. Through this contrast, the informant wanted to show that the management's conservative attitude affected the bank's IT scene. He gave some examples about the bank's conservative attitude, which will be discussed next.

Cost a barrier to investing in IT:

There were proposals to link the bank's value chain with that of its subsidiary insurance company. However, it was not feasible to implement this project due to its cost. Neither the bank's nor the insurance company's systems were able to communicate with each other. The systems were old in their design, and the two institutions were not willing to invest in order to create this electronic link.

Another example that the informant gave was a proposal to link a number of the Islamic banks in the region. However, due to the cost of the project this proposal was also abandoned.

The deputy manager expressed the bank's worry about the proposed shared ATM network in Bahrain. He said that the bank was concerned about keeping up with the other banks' spending since that was not consistent with their way of spending on IT.

Size of the bank and the payback period:

The GM perceived its small size as discouraging the bank from investing heavily in IT. Due to its relatively small size, the bank could not afford to wait for a long period of time before breaking even.

Investing in developing expertise:

One of the EDP manager's concerns was the lack of enough human resources within the bank to automate its systems. The EDP department was made up of only two personnel

who were burdened by running the daily operations. More expertise were needed in this area to enable the bank to cope with its IT development needs, but cost was perceived as a barrier.

Centralised Control:

Though none of the bank's informants mentioned it, informants from other organisations that had had contacts with the bank whom I spoke to mentioned that the bank's decisions were highly influenced by the GM. The wishes, desires and perceptions of the GM were central to any IT initiative at the bank.

The delay in adopting the ATMs could be attributed to the GM's perception that the ATMs would encourage their "limited income clients" to withdraw their salaries quicker than before and hence affect negatively the bank's ability to lend the deposits in hand. The GM's views discouraged the bank for a time from adopting these systems, though there were others in the bank's management who had different views about the ATMs.

IT as a 'demanding wife':

The deputy manager described IT as a 'demanding wife' who burdens her husband with excess expenses to meet her endless desires. He gave the example of the bank's new workstations which required enhancements and updates to their main systems. This meant that the bank needed to invest more than the cost of the workstations to adopt the new systems.

Garish versus core system:

One of the bank's cultural characteristics was their classification of the IT systems as either being core and essential or 'garish' and luxurious. As mentioned earlier, the informants did not define what they perceived as core and what they perceived as 'garish'. However, from the manner in which they described their systems, I inferred that whatever system needed high investment may be classified as 'garish' and be

postponed as long as possible. For example, one incident about the bank's old systems concerned the modems that transferred data from the branches to the headquarters. Although they were slow, the bank did not bather to invest in acquiring more efficient modems since they accomplish their task.

Chapter Seven

Formal Local Banks Case Study

Introduction:

This chapter presents case studies of three local banks that shared similar

characteristics in their approach to adopting IT. Two of these banks are big banks

while the third is small in its capital base and branch network as compared to the other

two banks.

Local Bank Three (L3)

Introduction:

Local Bank Three (Local Three) is owned by the private sector in Bahrain. The bank's market share of Bahraini operations in 1992, according to a consultant report, was approximately six percent.

I interviewed three informants from the bank. The first was the head of the IT section, who was a Bahraini whom I interviewed him four times in his office. The second informant was an Indian senior manager of credit administration whose interview took around one hour in his office. The third informant was a Bahraini manager of credit and marketing who was interviewed for around two hours in his office. All interviews were tape recorded.

Business Focus:

The banking environment as perceived by the senior manager - credit administration:

The senior manager perceived the banking market in Bahrain as 'overbanked'. There were 19 commercial banks serving a limited number of borrowers and depositors. Competition had increased as newcomers joined the market. For example, in 1993, a new bank joined the market and was expected to share the pie with the other eighteen banks. In addition to the new bank, there was Bahrain Finance Company, a non-banking institution which provided personal finance services to the public an area that the banks were targeting as one of their main business activities and hence exerted even more competitive pressure on them. The growth in population and the change in business opportunities in the economy spurred banks to change their target to the

personal finance business as a substitute of other businesses such as financing the construction sector that decreased in magnitude as compared to other business activities.

The informant believed that all banks were after the same type of businesses due to the limited opportunities within the environment. He claimed that factors such as the small manufacturing base in Bahrain, the drop in oil prices, and the decrease in government expenditure had changed the business opportunities open to banks and made them shift their focus to other opportunities that they had not previously paid attention to, such as personal finance.

The bank perceived Local Four and Local Five as being its main rivals, despite the big difference in the size of capital and operations between these two banks and Local Three. Local Four and Local Five were the largest banks in Bahrain in terms of branch network and local operations. In order to compete with them, the bank considered increasing its branch network a strategic goal. The senior manager also mentioned foreign banks such as the Foreign Bank Four (F4) and Foreign Bank Six (F6) as its rivals. However, he believed it was hard to compete with these foreign banks for their depositors who had been banking with them for a long period of time and were seeking confidentiality.

Business focus:

The bank's operations focused on Bahrain. Since its establishment in the late seventies, the bank was mainly geared towards serving the business community. According to the credit and marketing manager, the bank's tactic to gain a greater share of this segment was to depend on providing personal service and to establish links with custom clearing houses. Through these links, the bank gained more merchant clients. The informant claimed that through their long focus on this type of business, trade finance, international remittances and foreign exchange had become the bank's forte.

The bank was disadvantaged by its capital base which was small as compared to the main two banks in Bahrain. Their capital almost quadrupled that of Local Three. The bank therefore perceived itself as not able to serve the complicated lending requirements of the largest customers. However, the bank participated in loan syndicates to some of these giant corporate clients.

Other banks in Bahrain have preceded Local Third in exploiting the consumer retail banking business. To catch up with them, the bank's strategy aimed at expanding its branch network to secure more business. Increasing the deposit base of the bank was one of the main aims of increasing the bank's branch network. According to the credit marketing manager:

> ".. it is difficult for us to compete on the larger clients.. the larger the client is the more complicated the product he wants.. so really we are not geared up yet to handle these large syndication.. we never really manage a syndication, though we participate in some of these. We know that this is not our field, therefore, we just restrict our activities to just participation... on the other side.. consumer loans .. we are reasonably capable of servicing that sector... but mainly our main business comes from the commercial, the community development market.. it is there because there is the highest return and it is there because there is the highest risk. But we think that we have been there in that market for a long period and we know our clients and we know who is good from not.."

Role of IT to the bank:

Deficiency of current IT systems:

The bank's IT systems were adopted in 1983-84. The role that IT played at that time was to automate the bank's accounting records and to enable the bank to produce its financial statements on time. Since 1983, there had been no major IT change in the bank's infrastructure nor application systems. The bank depended on programs that they had developed internally to run on PCs to meet the application requirements that the bank's mainframe application system could not. These PC programs were, however, unprofessionally developed and not integrated. Many of the bank's operations were operated manual.

According to the IT manager, the current IT systems were expensive to operate as they needed a lot of manual intervention and required processing after normal working hours.

The most serious deficiency, however, was the inability of the systems to support the bank's expansion goals. As mentioned earlier, the bank was in the process of increasing its branch network to compete with the main local banks in Bahrain in order to secure a greater market share of deposits and loan products. However, the bank's infrastructure could not support more than five communication lines. The bank needed another five communication lines to support the additional five branches that they intended to open. The limitation of the bank's system was a main obstacle to achieving the bank's strategic goal and put the bank in a competitive disadvantage as compared to its main rivals.

The bank was also aiming to achieve growth in its commercial business market share. However, the current system did not cover this functional area of banking, despite its importance. It was not feasible to increase processing transactions without increasing the number of staff in the department. This option was expensive and expected to nullify the effect of gaining a wider market share.

There were other functional areas that were still operating manually or by the disintegrated application systems that ran on the stand alone PCs. These poorly designed systems were affecting the bank's product delivery quality. The credit marketing manager complained that much of the needed reports were manually prepared based on seeking information from the different functional areas. He believed this affected negatively the bank's responsiveness to its clients.

New vision and new role of IT:

The bank was in the process of renovating its IT scene with a new system. There was a new vision about the role of IT to the bank that was wider in its scope and more intimately linked to the bank's business than the role that the existing IT systems had played in the past.

267

Firstly, IT was perceived as an enabler to the bank's strategies. With the new system, the bank would be able to fulfil its expansion targets, whether in the number of branches or in the market share of the traditional lines of business. Moreover, IT was linked to service quality and product delivery, two broad goals of the bank's strategic objectives.

Secondly, IT was perceived as a means for re-engineering the bank's internal processes, through enhancing its communication channels and embarking on electronic channels for directing business transactions through them, the aim being to reduce the paper work and enhance the speed of processing. The informants believed that they could gain a competitive advantage over other banks through the efficient use of IT internally, and hence improving the quality of delivery and freeing more of its staff to personally serve their clients:

> ".. if your red tape paper work is reduced, you automatically give the bank's time to the clients, which now really we can't; I don't want to set with all of these pieces of papers, I'd rather go and sit with a new client.. this is a luxury that only become true with the introduction and development of IT.." Credit marketing manager

However, the informants stated that this vision could be implemented in a second phase, after the required IT infrastructure that could support such vision was built within the bank.

There were other visionary plans to link the value chains of the clients with that of the bank: through an electronic banking system to enable the clients to open remotely letters of credit and guarantee through 'corporate access terminals', or by devoting lobby terminals for loan applications to consumer clients. The aim was to reduce the amount of paper work within the bank and enhance its responsiveness to clients. These targets were a vision that the bank management claimed they were planning to implement in a second phase after having built their new IT infrastructure.

Thirdly, the informants perceived MIS as an important tool for enhancing the efficiency of the bank and improving their quality of service to their clients through increasing responsiveness. With the old system, inquiries about the clients were performed manually, which necessitated that a longer time to respond to a given client application:

".. one of the things that we are looking for is a better management reporting system. At the moment we have certain information that comes from the IT department. But it is not enough. and it is not presented in the way that ought to be presented. It did not cover certain areas that are not linked to that system.. you have to get six or ten reports and you have to put them together because of our system.. it is very difficult.. there are many things that we require to be done and what you really need is a fresh look, a brand new look.. I want auditors to be able to check that , I want a certain control to be done over the system..."

".. I would like to see the full picture of my clients.. if I have the right technology, I would like to just press a few keys and I would have a detailed picture.. I want to know more, I don't want to go to a report or a file which is that big.. I want to have a file that is in the system, this makes it easier to me to respond faster to my clients. So MIS to my task is crucial.." Credit marketing manger.

Transforming the bank's image:

The bank had a rough time during the late eighties, when it lagged behind its rivals in terms of services and products it produced.. The credit and marketing manager argued that an important role that IT would play in his bank was to transform its negative image to a more favourable one:

".. the other thing is that we aim for is having a change in our image.. we want to be seen as a technology driven bank rather than a follower that have what other banks had five years ago.. I think that we can help our image considerably once we put the technology in.

.. we want to show the clients that we are different.. we want to change the image of being a slow bank.. being the slowest in terms of technology development, we want to create an image that this is the bank that is growing... we have the people, we have the management team, we have the right board, what we need is to change what is left.. the system.. it is image and the technology will help us in improving that image.... I can't be the village bank, if you like. If we like to grow. we need to be a modern bank." Credit marketing manager.

Main IT developments:

For nine years, Local Third was managed under a technical services agreement with Bank of America (BofA). Three senior managers, one of whom became the GM. seconded Local Three. During this period, the EDP section was developed with the aid of technologists from BofA. Consequently, the IBM system 4300 and the banking applications system Capital International Banking System (CIBS) were adopted.

Moreover, Local Three linked itself with the BofA electronic data interchange and paid fees for using it.

The IBM 4300 and CIBS applications systems served the bank in producing on time financial statements such as the profit and loss and balance sheet. Though the system was a real time system, it was considered by the IT manager as a primitive one. In 1986, the bank upgraded it to IBM 4361. From that time until 1992 no significant adoption of IT had taken place within the bank. To cope with the users' needs during that period, the IT section developed in-house programs that run on PCs. These programs were poorly developed and integrated, according to the IT manager.

According to the informants, during this phase, there was a continuous pressure both from the market and from within the bank to develop the bank's IT systems. However, for reasons that will be discussed later, the bank did not respond to this pressure. Nonetheless, the IT manager maintained a strong link with IBM, even after the agreement with BofA had expired. IBM representatives in Bahrain worked closely with the bank's IT manager to prepare preliminary studies about the deficiency of the bank's IT systems.

The preliminary studies prepared with the aid of IBM were passed to the board of directors in 1992, after a new GM had been appointed. Consultants were invited to the bank during that year.

The bank decided to scrap its old system due to its deficiencies in meeting the new strategic plans of the bank. A new IBM system, AS 400, was selected with a new modular application system, Equation 3. In addition to AS 400 and Equation three, the bank was building its infrastructure based on using PCs and LAN environments that were linked to the AS 400.

By the end of 1992, the bank had adopted its ATM systems. This was late as compared to other banks' adoption of the ATM systems. However, the adoption was more or less in line with the other small banks that were of the size of Local Three.

In 1993 the bank launched its credit cards. It was the second bank in Bahrain after Local Four to introduce its Visa credit card. The bank outsourced this business to a regional financial company operating from Bahrain and serving the Arab countries. At the outset of launching the credit cards, the bank did not stipulate that applicants needed to open an account with the bank, a policy which was similar to that of Local Four. However, the bank changed its policy later on and restricted its card holders to those who had accounts with the bank. The credit card business was severely affected by a problem with the outsourcing company that issued and processed the Local Three Visa cards. As a result of this problem, the bank decided to launch another credit card, MasterCard, that it had not planned for previously. Moreover, the bank was planning to transfer the card processing to the bank itself despite the high cost.

The informants talked about a number of objectives that they aimed to achieve from migrating to the AS 400 system, Equation three, and the PC and LAN environment. Among these objectives are the following:

- enabling the bank to expand its branch network;

- automating more functional areas. Special attention is paid to the trade finance system. The aim was to enable it to process more applications per day. The treasury was another of these functional areas.

- Enabling implementation of a better MIS system.

- Enabling the bank to re-engineer its processes based on the capabilities of the new infrastructure.

At a second phase the bank's vision was to:

- adopt 'corporate access terminals' to enable corporate clients to remotely open letter of credits and guarantees;

- adopt a phone banking system;

- adopt 'lobby terminals' to allow loan clients to inquire about, and apply for loans without the need to interact with the bank's employees;

- improve the bank's responsiveness to its clients through exploiting the LAN for decision making.

It was not feasible to implement the above visions without migrating to the new IT infrastructure, according to the informants.

Drivers to IT initiatives:

The drivers for IT initiatives before 1992 came from within the bank, guided by the BofA programmers who aimed at automating the bank's accounting system. The IT department was the impetus for such initiatives even after the agreement with BofA had expired. The IT manager was the visionary as to what they needed to develop or to buy from the market.

Drivers for the turnaround initiative:

The main drivers for the turnaround initiatives, as described by the informants, came from outside the bank, from the market forces, and were reflected in the bank's business strategies. Some of the drivers that the informants talked about were symbolic in nature, enabling the bank to create a favourable image. These drivers are described below:

Rival initiatives:

Responding to their rivals' initiatives was one of the main drivers of the bank's IT strategies. The bank considered its rivals' actions as a bench mark against which it

determined its adoption targets and pace. The IT initiatives that Local Three talked about had either been adopted earlier by their big rivals (e.g. the ATMs and the credit cards) or were being adopted contemporary with other similar banks, e.g. Local Two and Local One whose IT initiatives were similar to those of Local Three and were launched at more or less the same time.

As has been reported earlier the bank wanted to create a positive image for itself by being in line with the others.

Protect its customer base:

The informants rationalised their IT adoption behaviour as a reflex to the competitive threat. Local Three suffered from a shrink in market share during the 'hibernation' phase it went through.

The central bank as a driver:

Local Three had experienced severe profitability problems in the past. As well as the other banks, it was requested by the central bank to provide certain financial reports about its activities at certain predefined dates. This requirement had forced the bank to rely on its MIS to produce the required reports for the regulatory authority. In addition, the bank, like all other banks in Bahrain, was requested to adopt an encoding NCR system to encode the checks sent to the central bank.

Business plans:

The bank's business plans had also driven its IT initiatives. For example, the bank's vision to increase its branch network, operating it as a profit centre, directed the IT strategy.

Other internal drivers:

Reducing operational costs and work pressure:

One of the drivers influencing the migration to the new system was reducing the operational cost of running the old system, which had required more staff. In addition to that, the bank had experienced an increase in the number of its transactions, which required automating some functional areas to avoid employing more staff to handle the increase.

Formation of IT strategy:

The no strategy era - a 'chaos' development approach:

Prior to 1993, the bank did not have any formal mechanism for defining its IT needs and creating an IT strategy. The bank depended on BofA specialists for adopting its current system, IBM 4361, and its CIPS. Since 1986, there had been no major developments within the bank other than a 'jungle of programs' developed in a chaotic manner, which were poorly developed to run on the PC environment.

During this phase, the IT manager gave vision to the bank by alerting them of what ought to be adopted. He suggested the ATMs but his request was rejected by the bank's management among other things. Nonetheless, he succeeded in introducing SWIFT to the bank and untying the bank's expensive relationship with BofA EDI network, which did not provide as wide a coverage with other banks as SWIFT did. This step was taken after the bank's contract with BofA had expired. Generally speaking, the IT initiatives during this phase were driven by the IT manager who was frequently in conflict with the head of the bank about the adoption of IT systems. Nonetheless the bank's IT initiatives had insignificant effect on the bank's business.

The formal strategic planning era:

Formal strategic planning within the bank started in 1992, preceded by changes in the board of directors and the GM.

The initiative was started in 1992 by the IT manager in collaboration with the bank's vendor, IBM. They prepared an evaluation study evaluating the bank's structure, the hardware and the software. This initiative was followed by another initiative by the IT manager in which he defined some of the areas in which user departments were pressing for more automation.

The newly appointed general manager then supported the IT manager's initiatives and passed on the preliminary studies to the board of directors whose approval was needed for any major IT initiatives. The board of directors, which included new members, decided that a consultant was needed to aid the bank in setting its strategies.

The consultant helped the bank to formalise its business strategies and define its goals precisely. The consultants formed steering committees for developing the bank's IT strategies, in which top management and representatives from the IT section and other support units participated. For the initiation and implementation of the first IT strategic plan, some of the board members participated in ad hoc committees.

Figure 1: Impetus summarises the main impetus of the bank's IT strategy as discussed by the informants. The business strategies were the main impetus for IT strategies, they claimed. A second impetus of the strategy was the diagnostic evaluation the consultant and
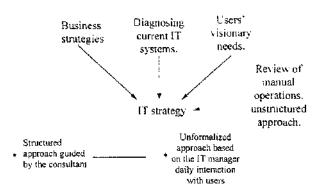
Figure 1: Impetus of IT strategy in L3

the IT department had made, which concluded that the bank's infrastructure needed to be changed to enable the business strategies to be implemented. In addition to that, the consultant formed groups in which representatives of the users participated to document their vision of the main automation requirements within each section. In addition to these three main impetuses to the bank's IT strategy, the IT manager talked about an unstructured approach, in which, through daily interaction with the users or his exposure to the bank's operations, he defined the functional areas that needed to be automated:

> ".. it is the business strategy plan.. for example, they proposed opening three branches for next year, we did our strategy to find out what we need for the new branches, do we need to expand in our system or not, do we need to upgrade our hardware or not, do we have the capabilities on the existing systems, some defined the requirements according to the whole bank business plans, and in some cases we, by chance, discover that there is a job that is done manually; why shouldn't we write a memo saying that we found that this function can be automated? So it is through two ways, but the major method of defining the business needs of IT systems is through studying the business plan which is produced by the chief executive and his team.." IT manager.

The IT strategy was implemented in two phases. In the first phase, the bank aimed at migrating to the new infrastructure and installing the new applications systems to replace the bank's old banking system. In this phase, the bank also aimed at automating the main functional areas such as the trade finance and the treasury department. In a second phase, the more revolutionary changes within the business processes were expected to be implemented.

Role of the main stakeholders in developing IT strategy:

Role of the IT manager:

The IT manager played an important role in providing the needed jolt for formalising the IT strategy process. This role was very restricted, however, prior to the changes in the bank's board of directors and management.

The IT manager was the 'champion' behind triggering the IT strategy process. He 'bombarded' the management with memos regarding the bank's IT deficiencies and the need for improvement. He also recommended some strategic IT systems such as ATMs, though he failed to convince the board to spend to adopt them.

The IT manager maintained a strong relationship with the vendor IBM. Both the IT manager and the vendor worked together in breaking the static condition of the bank's IT scene through diagnosing the IT environment and pinpointing its deficiencies.

The IT manager participated as the project manager for implementing the new IT strategy and migrating to the new infrastructure.

However, he aired his dissatisfaction with his reporting line to the operations manager who was not the decision maker as to IT requirements. He argued that a better arrangement could be achieved through his reporting directly to the GM, who was the main decision maker and the liaison with the board. The IT manager did not have any influence whatsoever over the bank's business goals and strategies.

It is worth mentioning that the IT manager's experience with the systems was acquired through on the job training and through his previous job as a joiner programmer with a manufacturing company. His educational background was in marine biology, totally unrelated his banking career. The IT manager had joined the bank just a few years after its inception and had gained all of his banking experience through working within its IT department.

Role of the consultant:

The consultant was the champion who guided strategic planning in the bank. Feedback from the committees and the users' group representatives helped the consultant in formulating the bank's plans. I inferred that there was an ownership network between some members of the top management and the international consultant employed by the bank.

Role of the vendor:

The relationship with IBM had begun as early as the bank's technical agreement with BofA. As narrated earlier, the vendor worked closely with the IT managers in diagnosing the bank's IT problems.

The relationship with the vendor is strategic as the bank's future IT strategies were dependent on the vendor's hardware and software systems. The bank's business goals depended on what the Kipiti system could support. As mentioned earlier, the bank opted for the 'off-the-shelf' modular package, Kipiti-Equation 3, to meet its IT needs.

The vendor played the role of informant to the bank, updating it about newly available technology within the field, and on some occasions, introduced its own consultants to the bank to promote their views about strategy-related issues. I infer that there is an ownership network between some of the bank's board members and the vendor.

Role of the board of directors:

Representatives from the board of directors became directly involved in the ad hoc committees which were concerned with turnaround strategies. They were liaisons with other members on the board. Moreover, they were involved in evaluating the newly proposed systems, and following up the implementation of the strategies.

Relationship between business strategies and IT strategies:

The relationship between business strategies and IT strategies in this bank went through different phases.

In the first phase, there was no link between the two, and there were no formal business or IT strategies.

> ".. one time we had a professor from IBM.. he came here and talked with the previous GM. He said to the GM would you like the IT manager to have an IT strategy? The GM said 'yes', the professor said 'do you have a corporate strategy'. The GM said 'no'. The professor said 'how do you want the IT manager to formulate an IT strategy if you don't know what you want to do in the next five years'.." IT manager.

During the second phase, there was a transformation in the bank's culture, as will be discussed later. For the first time, the bank formulated business strategies that guided its business activities over the next three years. IT in the second phase was perceived as an enabler for the newly
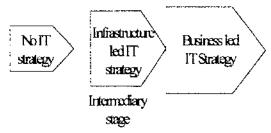
Figure 2: Relationship between IT strategy and business strategy

formulated business strategies, and consequently, a link between the two was established. There was, however, an intermediary stage through which the IT strategy had to go before it could enable the business strategy. In this intermediary stage, the IT strategy was mainly guided by the technical issue of scraping the old infrastructure, which was a hindrance to the business strategy. The concern of the IT department during the intermediary stage focused on technical issues related to installing the new infrastructure rather than achieving ultimate business goals. During this transformation stage, the IT manager directed the project, since he had the technical knowledge that none of the business unit managers was able to handle. Once the bank had passed this intermediary stage, a direct link between its business strategy and IT strategy was easily established (see Figure 2).

Bank's culture:

Ownership of the bank:

The idea of establishing the bank came from prominent businessmen in Bahrain. The shares in the bank were mostly owned by the private sector, in which merchants participated heavily. The bank's board of directors reflected the power of its shareholders and was dominated by the business men who had founded the bank.

Ownership and bank's business:

The merchants' interests were reflected in the bank's business. As mentioned earlier, the bank focused on trade finance and had developed considerable expertise in this field since the early days of its operations. This business direction was reflected in the bank's new business and IT strategies. One of the basic functional areas that the bank was automating was that of trade finance. The aim was to enable this section to process a bigger number of transactions and gain more business from the merchants' who to a great extent owned the bank.

Ownership, world views and spending on IT:

Before 1992, the board of directors, which was dominated by the merchants, interfered in the bank's IT decisions and discouraged any investments on developing the IT scene. The account that the informant gave explaining their 'stingy' behaviour with regard to spending on IT was related to the crises that the Gulf went through, such as the First Gulf War, and the decrease in the oil prices. Based on the informants' accounts, the board perceived their world, as being very fragile and their response to any IT initiative was it is 'too early to adopt it'.

I infer that the board's attitude reflected the cautious psychology of a merchant who is highly influenced by how his business is doing in the market. When he perceives that it is a time of recession, he tends to stop spending and concentrate on running the

operations. As will be discussed later in this section, investing in IT to gain a competitive advantage was not perceived as a priority by the merchants who dominated the board.

The profitability problem and the hibernation period.

By 1987, the honeymoon for the Gulf oil based economy was over. The region was hit by a harsh recession that affected the economies of all the Gulf countries including that of Bahrain.

Almost all of the banks had suffered from the recession. However, some had suffered more than others. Local three during that period was heavily involved in financing land and share speculators. These two markets, shares and real estate, collapsed and resulted in large number of bad debts to the bank. The bank's debt problems were not just local, they were international as well. The bank participated in loan syndicates with countries in Latin America that failed to honour their obligations. By 1987, the bank was in a shaky financial position.

The hibernation period.

From 1986 to 1991, the bank went into a 'hibernation' stage. A new general manager was appointed to revise the bank's credit policies. He acquired the inherited burden of doubtful loans. The general manager, according to the marketing manager, "did not think of growth, did not think of expansion, did not think of doing new business or financing new business. His objectives were to reduce these doubtful accounts and that was what he did".

During this stage, all that mattered was cost. The bank's IT scene was totally neglected. There were no new developments taking place, and any new proposed IT initiatives by the IT manager were discouraged by the general manager and the board. At the same time, other local banks were investing in developing their IT scene. For example, Local Four and Local Five introduced their ATMs in 1988. The IT manager of Local Three proposed ATMs to the bank's GM but he rejected the idea because of the cost.

The revival era - revolutionary changes:

From 1991 on, the bank started to recover. In 1991-1992, the bank experienced a change in some positions of its board of directors. Then in 1992, the bank recruited a new general manager with European banking experience. The new composition of the board and the new general manager triggered revolutionary changes within the bank. These changes pertained to both the conceptual aspects such as the strategies of the bank, and the concrete aspects, such as the type of systems to be adopted and the position of employees.

The bank became more supportive of investing to achieve these changes. As mentioned earlier, the bank's culture became more open to outsiders, such as the consultants and the vendors, it shifted from a 'one-man-show' to joint decision-making reached through the steering committees which represented the different stakeholders. Furthermore, the new board members became more involved in IT strategic decision-making through the ad hoc committees, and became more supportive to the changes taking place within the bank.

Cultural Gap:

The most important symptom of the cultural gap within the bank was the delay in implementing some strategic IT systems and at a later stage, adopting the very systems that had been rejected before.

> ".. I recommended implementing the ATM system before Local Five, and because we are late, we lost a lot of customers, they went to Local Five.. so the cultural gap is there even between the management and the IT. It is affecting the business opportunities. Recently, the case is different but previously it was wider.." IT manager.

The cultural gap was present because the previous board of directors, whose approval of any major investment in IT was needed, did not appreciate the competitive role of IT within the banking environment. Some of the board members were of an older generation that was unable to comprehend the transformations created by technological

change. Another reason for the former board's resistance to investing was related to their perception of their bank as a supporter to the merchants' business, and therefore they neglected investing in technologies related to the mass consumer market, such as ATMs. A third reason for the reluctance of the former board to invest in IT was related to their psychological formation as merchants and their high perception of risk when they sensed threatening signals from the economy.

The cultural gap between management and technologists narrowed with the changes brought to the bank. The new board members were more appreciative of the role of IT and more liberal in their spending. The formation of committees enabled a mutual vision that was guided by the consultant. Nonetheless, there was still controversy about to whom the IT manager should report, and his rank in the bank. The IT manager believed that a better arrangement could be achieved through creating a direct reporting line between him and the GM instead of through an intermediary, who filter his views from the GM. Moreover, he wanted to see his section become independent from the operations department, and he wanted to become part of the top management, enjoying the power to represent his views.

Need for expertise:

The informants expressed their concern about the need for expertise from within. The credit and marketing manager believed that the bank needed expertise capable of transforming their appreciation of and willingness to invest in IT into a tangible return.

The IT manager expressed his views about the need for a 'business system analyst' who would be a technologist, and at the same time. an expert in the bank's business. The presence of such experts would help the bank in defining how IT could best serve the different functional areas within the bank.

High turnover in IT staff within the bank:

The IT manager expressed his concern about the high turnover of his staff. He perceived the IT staff as a scarce resource that is expensive to train, develop and replace. The problem of high turnover of IT personnel was a result of the low status of the IT staff in the bank. This status needed to be revised to match the new role IT was playing in the bank.

Local Bank Four (L4)

Introduction:

Local Bank Four (Local Four) is a joint venture between Bahraini investors and regional banks from another country in the region. The main operations of the bank are in Bahrain, though the bank have a few branches outside Bahrain. The bank is considered one of the two main players in the Bahraini market, with a market share in 1992 of around 20%, according to a consultant's report.

At Local Four, I interviewed three informants, two from the IT department and one from a business unit. The informants' ranks within the bank were Senior Vice President (SVP), head of IT, Senior Manager within the IT department (previously head of the IT department) and a credit marketing Senior Manager. All interviews were tape recorded.

Business focus:

Change in business opportunities:

The senior credit manager argued that the Bahraini banking environment was overbanked and the market opportunities had changed in the nineties from those in the eighties. The government expenditure on infrastructural projects during the late seventies and the early eighties affected positively the construction sector and, indirectly, other sectors. The bank was highly involved in financing big projects and big corporations during that period. However, with the drop in the government expenditure there was a shift in business opportunities towards the consumer market.

Strategic businesses:

The senior credit marketing manager argued that the bank was involved in all types of businesses. However, it focused more on the retail business. The bank has the second largest deposit base in Bahrain and the second largest branch network, just a few branches short of the largest branch network in the country. The large deposit base has enabled the bank to target the lending business to the consumer market. Local Four started targeting this business late, as compared to its main rivals in this type of business, Citibank and Standard Chartered. The bank's business will continue to focus on retail banking which targets the consumer market, and expects this segment to grow faster than corporate banking business.

Corporate banking business is the second important area of business for the bank in Bahrain. The bank approaches this market through its corporate-relationship officers who establish personal contacts with the potential clients. The main rival of the bank for this business is Local Five.

Local Four is also active in the treasury business, and has recruited a number of experts in this area to reinforce its business opportunities.

Unlike its main rival Local Five, Local Four was not able to secure a sizeable amount of government business.

In Bahrain, as well as in other countries in the Gulf area, there is a large number of Indian expatriates who are a source of capital outflow to India. The bank wanted to exploit this opportunity and establish business links to India by opening a branch there. The bank also has a regional presence either through branches or through subsidiary banks in some of the other Gulf countries. Its main business, however, focuses on the Bahraini market.

Perceived role of IT:

Mass market versus a relationship market:

The credit marketing senior manager classified their markets as 'relationship' markets or mass markets. In the 'relationship' market, IT was expected to play a minor role in promoting the bank's business and creating opportunities. The informant claimed that there were few construction, trade houses, and manufacturing entities that didn't justify heavy investments in IT. For each of these entities, there were different lending requirements that required different processing. The bank's strategy for tackling this type of market was through depending on 'corporate-relationship officers' who contacted these entities directly and looked after their business with the bank.

The credit marketing senior manager's past experience with electronic banking was behind his views about the limited role of IT for creating business opportunities in the 'relationship' market. The informant argued that, based on his past experience at Citibank, electronic banking faced limited success in creating business opportunities for the bank and did not justify the amount invested in it.

In contrast to the 'relationship' markets, the mass market or the consumer market, as the senior credit manager described it depended heavily on IT. Investing in technology and systems was considered very strategic in terms of determining what products to offer and how to compete in the market:

> ".. I can look at the market as mass market or relationship market.. you look at them either as mass market, which you talk about consumer and retail and talk about large number of customers.. and you can look on to relationship market which depends on calling and making direct sale or marketing activities on one to one basis.. we have to distinguish between these two markets, where you address technology defiantly.. with the relationship market the technology tend to play good part but the underlying strength does not come from there. Although you will see institutions trying to put terminals in the offices of the companies or the trading houses to basically have access to their activities with the bank, which could or could not be a fundamental reason of doing business with the bank.. on the other hand if you look at the mass market of the large numbers, you are probably looking at ways of using technology as an edge to generate revenue through making your service more convenient, making your service more efficient, and meet your customer needs in a more efficient and cheapest way.."

Source of revenue to the bank - a business goal:

IT was perceived as a tool for enabling the bank to reach its business goals. As mentioned above, investment in IT was mainly directed to the retail side. As one of the retail goals, IT was perceived as the means for generating fees or commission income not subject to the interest rate fluctuation in the market.

Support new products and improve the quality of product delivery:

The informants argued that a main role for IT was to enable the bank to introduce new retail products. Some of these products were completely IT-driven in nature, e.g. EFTPoS, ATM cards, and credit cards.

Product delivery and sale capability closely linked to IT:

All of the informants stressed the role of IT in improving the quality of product delivery and supporting the bank in selling its services. To quote the SVP:

> "... certainly, the product delivery and sales capabilities are becoming more and more closely coupled to the IT platform that are used to deliver them. We deliver few products that don't require interaction with an IT platform..."

> ".. we don't look at deploying technology solely for expense control, it is primarily driven for quality product delivery. A very aggressive market, the retail market, where we invest the majority of our IT dollar will continue to be the source of revenue for the bank in Bahrain and elsewhere.."

IT has played a role in changing the way in which the bank marketed its services. The SVP mentioned that they have adopted intelligent systems that changed how they promoted their banking services. Their marketing officers were able to use the intelligent systems for suggesting potential products that may most suit their individual clients.

Source of new deposit accounts through links with the retailers:

The EFTPoS was perceived as a link between the bank and the retailers in Bahrain. These retailers were provided the EFTPoS devices free of charge, in return for opening accounts with the bank. The EFTPoS was perceived as a tool for increasing liability products, i.e. deposit accounts.

Protect the bank's client base through improving their loyalty:

The senior credit manager argued that the bank's priority was to protect its client base from deteriorating. The next important goal was attracting new customers to the bank. According to the informant, the bank had managed to acquire the largest market share of credit card business. The IT senior manager claimed that it had managed to capture not less than 70% of the credit card market, which became the source of a commission income to the bank.

Change in business processes:

Enable the branches to perform as independent business units:

The bank was in the process of changing its organisational arrangements by providing its branches with more autonomy, enabling them to function as business units less dependent on headquarters. The SVP perceived IT as the means for enabling the bank to achieve this through enabling the branches to deliver products depending on the distributed IT systems. Moreover, the new arrangements aimed at decreasing the amount of human intervention necessary, enabling the branches to deliver their products at a minimal cost.

> ".. I think that the bank is refocusing how it delivers it services with an eye of maximising the delivery capability using IT.. in conjunction with that is distributing that capabilities as widely as possibly can. The decrease in telecommunications and hardware cost, it is becoming more and more practical to deliver these services and marketing tools at a lower cost.."

The vision that the SVP had was to automate all the mechanisms of product delivery. Although, this vision had not yet been achieved in the bank, it was a target.

Manage mass processing, automate decision making, and control cost:

For the mass market, IT plays a major role in processing mass transactions that require similar and repetitive processes. Cost control is one of the main objectives for deploying IT within this area. In addition to the above, IT plays a role in automating the decision making-process of some business. In this regard, the informants mentioned credit card business in which evaluation of applications was done through the system, the only times in which the bank's staff interfere being when there are problems with the individual clients.

In contrast to the mass market, the 'relationship' market is more heterogeneous in terms of the lending processing needs of each of its clients. The credit marketing manager saw a limited role for IT in this market.

Automating internal processes as a means of gaining competitive advantage:

Automating internal processes was perceived as a mean of gaining a competitive advantage over rival banks. The senior IT manager argued that all banks were competing to produce the same products and services. They differed only in the speed and efficiency of their product processing capability. IT was the tool that they believed enabled them to compete with the others by promoting internal efficiency.

MIS to enhance decision making and provide more credibility to the bank's internal control:

The credit marketing senior manager stressed the important role that IT played in enabling better decision making within his business department and the rest of the bank.

The bank had embarked on adopting a sophisticated MIS system to enable the bank to manage its risk exposure among other things. As will be discussed later, the bank experienced a change in its board and top management due to the heavy bad debt losses it had incurred during the mid-eighties. As a means to managing its global risk, the bank embarked on the MIS system. By publicising this matter in its annual reports and elsewhere, e.g. consultancy reports, the bank aims to increase the credibility of its corrective measures as regards to its historical credit problems.

E-mail to enhance communication and speed up decision making:

All of the bank's staff were interlinked by an e-mail system which enhanced communication and speeded up decision making, the IT senior manager claimed.

Expanding the bank's market:

IT was perceived as a tool to enable the bank to expand its market and compete with the money exchangers, a business that the other banks avoided due to the cost of processing as compared to expected revenue. To quote the SVP:

> ".. there are some transactions that are labour intensive, such as issuing drafts or providing a money transfer, which is a big business at this part of the world. Remittances is a good business and unique to the Gulf and it presents a real revenue potential.. if there is a lot of competition, then you have to do it efficiently, and at low cost otherwise the single function vendors such as the money traders will under cut your delivery of service. That is where we are investing in IT right now.. it will allow all branch network to provide a money transfer capabilities and draft issuing in an automated fashion. Being able to deliver that in a remote branch that is minimally staffed would not be possible without significant investment in base system that can be used in our larger branches where there is larger traffic that justifies the investment."

Main IT developments:

The seventies and the eighties - the mainframe era:

The seventies and the eighties and the early nineties were an era in which the bank's main IT developments depended highly on the mainframe infrastructure design.

The bank started its automation in the seventies with an NCR ledger machine to automate accounting books. Next, the ledger machine was substituted with another NCR mainframe that was able to support around nine terminals.

In 1981, the bank started expanding its branch network as a competitive measure, since its main rival was embarking on a similar branch expansion strategy. The NCR mainframe did not meet the requirements of the bank's expansion strategy and, consequently, the Tandem mainframe was recommended by the bank's vendor. The rational that the IT senior manager gave for adopting this system was a dual processing capability that enhanced its reliability. There was a major disadvantage to adopting Tandem however. At the time, there was no 'off-the-shelf' applications systems which could run on the mainframe, therefore, the bank had to depend on its internal resources for developing the applications systems that could run on the Tandem mainframe.

The competition with the bank's main competitor was fierce. Both banks, Local Four and its main rival, Local Five, expanded remarkably in terms of the number of their branches and products. Local Four had to change its internal systems development policy. The bank perceived this as an obstacle hindering it from competing with its main rival and from developing its growth strategy. According to the IT senior manager, the bank needed an army of programmers to keep up with its systems development requirements, which was not economically feasible.

In 1986, Local Four changed its applications adoption policy and decided to depend on 'off-the-shelf' applications packages. The bank adopted the NCR 9800 and Concept Financial System (TCFS) applications system. All of the banking systems were run on

the NCR and its companion, TCFS. Interestingly, the main rival of Local Four made the same move, adopting the same hardware and software systems.

Base 24, a strategic modular application system.

The bank did not scrap its Tandem mainframe system despite its adoption of the NCR mainframe. It decided to keep it for running the bank's ATM network due to its dual processing capabilities and its higher reliability. This decision was taken because of the introduction by the bank's vendor of a modular applications system, Base 24, that ran on the bank's ATM network on the Tandem.

Base 24 was the only applications system available that could run on the Tandem machine. It was capable of running 1000 ATMs, which was far beyond the bank's requirements, but it was purchased because there was no other option available to the bank if it wanted to keep the Tandem in operation. The senior manager gave another rational to their decision claiming that they wanted to provide the best solution by adopting the Base 24:

> ".. the main purpose was to look to the best solution, the best software on tandem. This is one of the best softwares available on Tandem.. because we have the machine..
>
> Comment: But at that time did the bank have the intention to introduce a Switch network in Bahrain?
>
> Senior Manager: No. There was only one version of the Base 24, either you take it or you go for another solution. To go for another solution you have to get the complete thing, the hardware and the software. We have the hardware, so our new investment is only on the software. This is why it is expensive for the {named their main rival} to get the Base 24. They have to buy the software with the hardware. They can't do that, they don't have the justification to invest that money to run just 20 to 30 ATMs.."

Base 24 formed the nucleus of the bank's retail systems. It enabled new modules to be added at minimal cost once the core was installed; it permitted the introduction of the EFTPoS and phonebanking systems, linking ATMs locally and within the region, and running a proposed shared ATM network in Bahrain. The senior manager claimed that adopting the core of Base 24 provided the bank with an advantage over its rivals by enabling it to adopt these retail systems at a lower incremental cost than their rivals:

"we introduced the point of sale because it was easy for us. We had the software and the hardware. What we needed was just to buy the module for the point of sale and add it to our system and that's it, because Base 24 has many modules, one for the ATMs, one for the tellers, one for the point of sale, one for home banking, etc.. other competitors can't buy the same system because they have to invest in the hardware as well..."

The excess capacity of Base 24 in running the ATMs enabled the bank to propose running an ATM network in Bahrain. The shared ATM proposal will be discussed later in this case report.

Linking ATMs with regional networks:

Local Four was the first bank in Bahrain and the region to adopt Base 24. Other banks in the region who were clients of the same vendor as Local Four then followed. The bank created a shared network with a number of banks in the region, including an international bank that has a global presence.

Unlike all of the local rivals, networking with other regional networks and proposing running a local nation-wide network was not a new project for the bank. The bank had gained experience in these areas through its regional branch in another state in the Gulf.

The credit card business - a strategic option:

The bank invested heavily in credit card business. First, it linked its ATM cards to Visa. This strategic move enabled the bank to have its cards accepted world-wide by any ATM machine accepting the Visa logo. The consequence of this move was to create a customer base that totalled 60,000 clients, a share that far outnumbered that of its rivals.

The bank went further and introduced its own Visa credit card. There was only one local rival that offered a Visa card. The other local rival offered a Visa charge card instead. The IT senior manager claimed that they had captured the major share of the credit card market, with a share of 20,000 card holders, whereas their two local rivals' share was 2000 card holders each.

In addition to the Visa cards, the bank introduced other credit cards such as Diner's Club and Master Card. However, the bank's IT systems were not capable of fully processing the transactions of these cards. Therefore, the bank went to a third party to outsource the processing of the credit cards transactions. The senior credit marketing manager claimed that, due to the deficiency of their internal systems, there was a pressure to adopt more advanced systems to meet the bank's business goals. The SVP claimed that their retail business strategy focused on the credit card business due to the high demand in the market for such products, and they were pioneers in fulfilling the need for this service:

> ".. We invested into a project to connect to Visa, Master Card and Serries. When we made a conservative analysis we anticipated that the fee income from cash withdrawals will pay for the project in something like 18 to 24 months. The project paid for itself in six and a half months. What we underestimated was the demand for the expatriate for the cash withdrawal during the nonbanking hours. And we are the only bank that provide that, other than the British Bank of the Middle East that has connections to Visa..." SVP

Telephone banking:

In 1993, the bank introduced its telephone banking system simultaneously with its main rival, Local Five. Both banks were preceded in introducing this system by a foreign bank. However, the foreign bank system was primitive as compared to the local banks' systems. Local Four asked the vendor to customise the phone banking system to provide a wide variety of services outnumbering what the other banks' systems offered. The aim, according to the informants, was to differentiate the bank's system from the others. The IT senior manager claimed that they managed to introduce the phone banking system at a minimal cost since they had already installed the core system, Base 24, and they needed only to buy the phone banking module.

EFTPoS System:

The bank managed to capture 75% of the EFTPoS market according to the SVP - head of IT. The bank offered the EFTPoS devices to retailers free of charge. The senior manager-IT claimed the bank had created a new norm in the market by introducing the EFTPoS. The new norm encouraged using the EFTPoS to substitute for checks, which

were not widely welcomed by retailers. Both Local Four and its main local rival, Local Five, introduced their EFTPoS at more or less the same time.

Shift in architecture from dependence on mainframes to a downsized infrastructure:

With the recruitment of the new IT manager, a new vision of its IT infrastructure came to the bank. The new vision focused on a downsized environment in which 'client/server' technology, local area networks and wide area networks were perceived as the path to future infrastructural design. The new IT manager had little faith in the giant mainframes and believed that they were expensive to acquire and maintain as compared to the cost of downsized distributed network processors. He believed that the future lay with a downsized environment due to its decreasing cost and increasing performance and capacity. Therefore, the bank started investing in the downsized environment, with the aim of enabling the branches to become independent business units relying less on the headquarters to deliver products. The SVP - head of the IT department - argued that this new vision about its infrastructure would enable the bank to be cost efficient and compete directly with the money exchangers by cutting down on costs and producing the required banking products, e.g. money transfer and drafts, in as efficient and speedy a way as the single function money exchangers.

Scrapping the old mainframe, buying a new one.

When I interviewed one of the bank's vendors, he stated that the bank had recently bought IBM AS 400, and by doing so the bank joined the majority of the banks in Bahrain in acquiring this system. I have little information about what the new platform was serving within the bank. However, when I talked to an informant who worked with the company that outsourced the bank's credit card processing, I was told that there were some disadvantages to the downsized environment. The major banking applications such as the credit card processing systems were mostly available on a mainframe environment.

Another IT project within the bank was scrapping their old Tandem mainframe that had outlived its expected life.

Intelligent workstations that change the work process:

The bank scrapped its old dumb workstations and adopted new intelligent systems that enabled the teller to perform multiple functional tasks from one screen, and market those products of the bank that may be of potential interest to the clients. In addition to the above, the intelligent system enabled a centralised supervision on the tellers. The new system changed the way in which the bank operated:

> ".. Currently, the branch network is supported by a 1970s style electro-mechanical accounting equipment. These are a {..} dumb like terminals that are today considered insecure from security perspective that can't be managed remotely and the functions that they provide are quite limited. In the modern advanced banking environment, the workstations that the teller has, need to operate a full range of banking products and has to have a lot of intelligence in it. The bank should be able through these equipment to market other banking products that the customer might have interest in them. To do that you need an intelligent workstation that can do a log of analysis. Run analytics on the customer portfolio and suggest investment opportunities or product opportunities for the customer..."

Reason for embarking on the IT systems:

In this section, I will discuss the most salient drivers of the bank's IT initiatives, as mentioned by the informants.

Competition, the main driving force:

The informants emphasised the role of competition in driving the bank's IT initiatives. The senior manager within the IT department argued that the bank did not have 'pre-plans', but all of their initiatives were sensitive to the competitors' initiatives. The main attention of the bank focused on the initiatives of the largest local bank in Bahrain, Local Five. Local Four and Local Five competed head to head with each other. Almost all of their IT initiatives were launched in response to, and contemporary with each other. For example, in the early eighties, both banks acquired NCR machines that ran a

maximum of 10 terminals. During 1981, both banks started competing in expanding their branch network. In 1986 - 1987 both banks acquired NCR 9800 and its applications system, TCFS. Telephone banking and the EFTPoS were launched by the two banks almost simultaneously, within just a few months. The same is true for the launch of credit cards, though Local Four was more aggressive in its marketing strategy than Local Five:

> ".. We are the second largest bank in Bahrain. Being the second largest we always look at number 1 bank in Bahrain which is Local Five. Local Five is our main rival..." Credit marketing senior manager.

> ".. as I have said in our previous meeting, here we don't have the strategy and plans to do certain things, here the market and the competitors are leading the bank to do what the market needs....

> ... the competition in the market forces us to introduce the technology...

> .. in 1981 the bank started thinking of having more offices rather than only one.. so the two major banks .. started distributing many branches across the island, the competition started between the two banks, whenever we put a branch they just open a branch next door.. after getting what we though to be the good locations we started thinking about developing the branches then we started looking for application software to accommodate the linkage for these branches.. Local Five went to NCR to support more than 9 terminals and we went to Tandem to support 256 terminals...

> Local Four introduced these systems with the other major banks and that was in 1988, like Local Five. The first bank was the British Bank of the Middle East, but they were very limited since they were restricted by the central bank to open no more than five branches in Bahrain. We tried to be the first, but due to some technical problems we installed the ATMs just a few months after Local Five..

> ... now we are changing to a card-oriented environment.. we thought of the EFTPoS to allow those to use there cards at the places they need without withdrawing cash.. and by doing so, we can keep their money and benefit from it.. Local Five were working on the same project at the same time.. everybody kept an eye on the other.. our strategy is competition-driven, we don't have pre-strategic plans.." Senior IT manager.

Competition barrier to IT initiatives- the shared ATM network story:

Competition was a main driving force for the bank's initiatives as well as a barrier to any collaboration based on using IT collectively.

Five of the main banks in Bahrain, excluding Local Four, met and discussed the prospect of launching a shared ATM network and an EFTPoS in Bahrain. They reached

the conclusion that it was too early for these projects to be implemented. The senior manager of IT in Local Four argued that the five banks delayed launching the project because their IT systems were not mature enough to develop it and they were also unprepared to spend on it. As for Local Four, it had the necessary IT infrastructure to launch the network. As mentioned earlier, the Base 24 was able to run 1000 ATMs, which exceeded the number of all ATMs in Bahrain. Local Four invited a number of smaller banks that were prepared to join a shared ATM network and asked them to sign a contract in which Local Four would run a shared network for the banks in return for a commission on the transactions run on the network. According to the informant's account, Local Five, who did not have the capacity to run or propose a similar network, protested to the regulatory body, who interfered and ordered Local Four to abandon the project. Later on, the regulatory body proposed running the national ATM network itself.

Based on the senior manager's account, regulation and rivalry between the two main banks were the reason for abandoning the shared ATM network:

> ".. we can run ATMs for small banks, you can use it as a switch. We proposed that to the banks and most of the banks responded positively to our proposals.. we went ahead to implement it but we were stopped by the regulatory body because some banks like Local Five complained and questioned why we wanted to do this. The answer to why because we have the best software and hardware and we can afford to do it.."

Defensive measure - protect the customer base:

The credit marketing senior manager argued that their IT initiatives were aimed at protecting their customer base from switching to the rivals. Next to this goal, the bank aimed at attracting new customers.

The vendor signals the competitors' intention:

The IT senior manager said that the vendors signalled the intention of main rivals. He told a story about an experience in which the vendors came to the bank and hinted that

the other main rival banks had the intention of adopting a given system. Such signals drove the bank's IT adoption initiatives.

Excess capacity in the bank's IT systems:

The bank invested heavily in its IT systems, building an excess capacity that gave the bank the vision to propose and implement other IT-related products and services. The adoption of Base 24, and its ability to run 1000 ATMs enabled the bank to propose the shared ATM network in Bahrain which it expected to give the bank a monopolistic power over the network, since the size of the Bahraini market would not allow several nation-wide networks to be run parallel to each other, as some informants stated. Moreover, Base 24 and its excess capacity enabled the bank to participate in creating a regional ATM network with other regional banks.

At the outset of adopting Base 24, which was capable of running the 1000 ATMs, the bank did not have a vision nor an intention to propose the shared network. It adopted this package because it was the only one available on the Tandem and because, according to the senior manager account, the bank wanted to be the leader amongst the banks in Bahrain by adopting the best product available.

Business strategies - driver of IT initiatives:

The informants argued that their IT initiatives were business-driven. The development of the 'global ATM card' system and the adoption of the credit card systems were mainly driven by the bank's business goal of generating income through commission fees, to mention one example:

".. it is largely business driven, believe it or not. I know that today we are looking at a card management system to do a whole host of functions to us. And we were looking at different software, different hardware that we can eventually run our own credit card portfolio... on this system. On the IT side point of view, they have this system that is running fine, or doing the job that it has to do for processing a simple credit card, but because of the business requirements and our need to be better all of the time, we are placing pressure on the IT to come up with a system that would be able to do a whole host of functions and services that we want that is today not available on the system that we have..."

Essential for internal processing:

The bank aimed to automate its internal processing and reduce the paper work as much as possible. Though they are moving in this direction, they have not yet reached full automation level, according to the SVP. The driver to internal automation was cost control, production of quality services and consequently, achieving a competitive advantage over the rivals.

Infrastructure enhancement requirements:

Some IT initiatives were infrastructural-driven. An example was the scrapping of the Tandem machine that had been in operation for 15 years, and moving from the mainframe environment to a downsized environment. These initiatives came from the IT department.

Formulation of business strategies:

Formal strategic planning started around 1988. The bank invited a consultant from abroad to help in formalising strategic plans. It is worth noting that the bank's main rival, Local Five, took the same initiative at more or less the same time, inviting a consultant from abroad as well. Though that both banks did not explicitly mention who had been invited to help them formalise their strategic plans, there were references from the informants about seminars and workshops which had been run by Arthur D. Little and in which both banks participated. One of the informants from Local Four allowed me to have access to some of the materials of these workshops which were run by

Arthur D. Little. It is most likely that both banks approached the same consultant either to help them in their strategic plans or to provide training for their top management.

The same consultant arranged for a workshop within the bank in which the top management participated. Its aim was to train top management to make their own strategic plans in the future.

For formulating the bank's grand strategies, there was a steering committee in which the general manager, the assistant general managers and senior managers within the bank participated. Once the strategies were formulated at this level, they filtered down to the different functional areas with more detailed tactical plans and predefined responsibilities given to each unit. The senior credit marketing manager claimed that the bank followed the Management By Objective approach for monitoring the implementation of these strategies.

As an outcome of the strategic workshops, the market was segmented, allowing for the prioritisation of sectors, the identification of target markets and the assignment of these segments to specific business units. The bank has a strategic horizon of five years for these plans.

The formulation of IT strategies:

The formulation of IT strategies within the bank had two main phases:

Improvised strategies:

In the first phase or era, the formulation of IT strategies was improvised, driven mostly by the bank's main competitor and the vendor who provided insight about what was available and how it could meet the bank's needs. During this era, the senior IT manager influenced business to some extent through his proposals as the main product

champion for any developments. There was no formal mechanism for linking business goals to IT initiatives, nor was there a mechanism for involving users or representatives from the business units in evaluating the system. The senior manager proposed systems that he heard about from the vendor or seen at an exhibition or felt that the rivals were about to launch to top management. The initiatives were improvised based on the pulses coming from the market or the bank's needs.

'.. because the X system before Tandem, which was also used by Local Five, was able just to support 9 terminals.. therefore, they went for a bigger NCR to support more than 9 terminals, and we went for Tandem to support more than 256 Terminals. The first step was the distribution of services in the Island, also we were perceiving ourselves as quick providers of services at that time. We had had in the branches long queues especially at the end of the month .. we said O.K we need to service just 22 locations plus some new locations in the future .. in order to serve people, we had to put more people on the counters.. this meant that this would increase our operations cost.. this have lead us to automating. As you understand now from my story, there was no preplan for what we had.. it was all cost, better service, and to be a leader.. we had had 10 tellers in the main office, now we have around 40 tellers. The manpower is the most expensive resource. For the hardware, you will repay it in a number of years but the manpower it is very expensive..."

".. as I have said in our previous meeting, here we don't have the strategy and plans to do certain things.. here the markets and the competitors are leading the banks to do what the market needs.." Senior Manager - IT department.

Formal IT planning:

The bank depended on consultants from abroad to aid them in setting their strategic plans. They formed a System Steering Committee (SSC) which was chaired by the bank's chairman. Representatives from all business units and other functional areas participated in this committee. The IT department participants were: the SVP - head of the IT department - who was the secretary of the SSC, and the IT senior manager. The credit marketing manager represented the consumer banking unit. Business strategies were articulated in this committee, and how IT could support these strategies was spelled out, according to the SVP account. Moreover, any requisite from the users or the business units was presented to the committee for evaluation through the units' representatives. The IT department representatives' duty was to prepare a cost analysis of the proposed projects, and, once approved by the committee, these projects became part of the IT department's strategies.

During this era, the business units became in control of what was proposed in terms of IT support. They had the ultimate power over voting for or against systems whereas the role of the IT department representative was restricted to providing advice to the committee when required.

There is a high dependence in the bank on committees for implementing major IT projects. The informants mentioned that ad hoc committees were formed, which dissolve once a project was implemented and accepted by the concerned users or the business units, who chair these committees depending on the nature of the project. If it was a business-driven project, then a representative from the concerned business unit would chair the committee. If a project was an IT-infrastructure-driven project, then the IT department would chair the committee. Project managers from the vendor(s) usually participate in these ad hoc committees.

Role of the IT managers in developing the bank's IT scene:

Two IT managers successively headed the IT department within the bank. The senior manager, who is Bahraini, headed the department first. During his period, he was the main product champion for running the IT scene within the bank. He depended upon the bank's main vendor and the exhibitions and seminars that ran locally or abroad, either by the arrangement of the vendor or other parties, for building his visionary IT strategies. Whenever he was exposed to new systems that may be of value to the bank, he took the idea to his management and worked on convincing them to adopt it. During this phase of the bank's life, the emphasis was on adopting mainframe technologies and adding to the bank's IT scene bits and pieces of systems the product champion was exposed to. In this phase, the bank had neither formal business strategies nor IT strategies.

> ".. in the past there was a different management team.. it was very difficult to convince them that the future is for the technology for the automation.. I took a very long time since 1982, when I

The assistant general manager, an American recruited from abroad, succeeded the senior manager in heading the IT department. The AGM, brought a new vision to the bank that differed from that of the senior manager, influenced by his past experience in the American banking industry. He was behind the shift in the bank's IT architecture, and was behind the adoption of the IBM AS400, a move that, according to an informant from IBM, was also influenced by the AGM's past experience at IBM. During this period there was a cultural shift in which the power for developing the IT strategy shifted from the IT department to the business units represented by the Systems Steering Committee. The recruitment of the AGM was a consequence of the cultural shift, as will be discussed later.

Role of the vendor:

The bank maintained a close relationship with one of the regional vendors, a relationship that had extended since the bank started automating its system.

The vendor played the role of the informer to the bank and affected the bank's IT strategies, especially during the improvised stage. The IT senior manager said that he worked closely with the vendor, who arranged for the participation of the bank's officials in exhibitions and workshops. Through these initiatives, the IT manager's strategic IT vision was shaped.

The Tandem machine, the Base 24, and the 'branch teller' system were some of the major IT adoptions that the vendor played a role in incorporating as part of the bank's IT strategies. The most important system was the Base 24. The bank's adoption of this system enabled it to exploit new business opportunities and gain a greater market share. Base 24 allowed them to accept credit cards at their ATMs and connect themselves to other network switches in the Gulf. Furthermore, Base 24 enhanced their connectivity

to other systems more than was the case for the majority of its rivals, including Local Five, and, hence, provided the bank with a potential competitive advantage.

The vendor became the liaison between its clients in the region. Consequently, shared ATM networks were created between Local Four and the regional clients of the vendor. who used the same system.

The advent of the AGM who succeeded the senior manager in heading the IT department, created a new link with IBM. From the informants' accounts, however, it seems that the relationship with the first vendor had been stronger and more strategic from that with IBM. The relationship with the first vendor may have been enhanced (or dictated) by the shareholders who had interests in both the bank and the vendor. This is my own speculation however.

Relationship between business strategies and IT strategies:

The relationship between business strategies and IT strategies took different forms. Historically, the business strategies were entirely separated from the IT strategies. This segregation of the two strategies was manifested in the adoption of the NCR ledger machine to automate the accounting processes, which had relation with the bank's competitive ability to do business.

At a later stage, the relationship between the bank's business strategies and IT strategies became more intimate. At this stage, the bank's business strategies capitalised on its IT strategies. This was exhibited in the bank's strategy to operate its branches as strategic business units with grater autonomy from the headquarters. This strategy was enabled by adopting a different IT infrastructure to provide these branches with more processing autonomy than the mainframe infrastructure. Another example of this relationship was

the retail business dependence on IT systems, such as the ATM network, phone banking, and EFTPoS, for increasing its market share.

Based on the AGM's account, the new infrastructural design that the bank was implementing would enable them to achieve cost leadership in some business activities.

There is another form of relationship in which the IT strategies gave a new vision about future business strategies. The excess capacity that was created from investing in Base 24 gave the bank a vision that was not envisaged when the bank adopted the system. The business strategy of earning commission revenue from running a nation-wide ATM switch network was enabled by the bank's excess IT capacity, which its rivals were not able to match. This nation-wide ATM network was not envisaged when the bank adopted Base 24.

There were instances where the business goals were hindered by the limitations of the bank's old IT infrastructure. Based on the account of the credit marketing senior manager, their old credit card system was an example of an IT system that disabled the bank's ambitious adoption of credit cards, therefore, the bank was in the process of adopting a more capable system.

Bank's culture:

Rivalry with Local Five:

The bank was formed historically, according to a consultant report, as a counterweight to Local Five. The main strategic actions at Local Four aimed at defying its main competitor or were a counter measure to Local Five strategies. The bank raced head to head with Local Five in doing almost everything. Most of the actions of the two banks were replicated by the other: the IT systems were adopted at more or less the same time by the two rivals, the branch networks were expanded simultaneously by the two, and

the dependence on the consultants for formulating the banks' strategic planning was a phenomenon that happened concurrently in both banks. The initiative of the Local Four to introduce the shared ATM network in Bahrain and run it through its systems aimed at creating a leadership advantage and defying their main rival in the race to control the market. The demise of this initiative came about due to Local Five resistance and complaints to the regulatory body.

An innovative, defiant bank:

The bank is considered as a consortium bank in which almost half of its shares are owned by other regional banks. Its strong capital base empowered the bank's ability to adopt IT systems which cost little, as compared to its capital structure. The informants described their bank as a daring one, which it does not refrain from spending on IT to gain a leadership posture in the market.

The bank's innovative approach was articulated in the bank's strategic documents. The credit marketing manager read me the following to support the view of the bank's culture that he wanted to portray:

> "Local Four assumes the role of unorthodox player in the Bahraini market. It creates an atmosphere and attitudes that eradicate the notion that we have always done it this way or we have never done it that way..".

The IT senior manager claimed that the bank's desire to be the leader in the market drove its improvised IT strategies before 1989. He further argued that due to the bank's supportive top management, a lot was spent on IT systems, which enhanced capabilities and enabled the bank to propose systems that the rivals were not able to match.

Ownership by other banks' enhanced expertise:

Local Four, through their regional branch and their shared ownership, owned an eighth of a shared ATM network in a regional country. Their ownership of the shared network enriched their expertise and decreased their perceived risk in initiating collective

projects. As mentioned earlier, the bank took the initiative in proposing the Bahraini shared ATM network, and launched their regional ATM network by collaborating with other regional banks. Their operations in other regional markets, their ownership by other banks, and their past experience with the shared network they owned, made them more daring in exploiting new business opportunities in this line of business. In contrast to Local Four, their rivals were reluctant to enter a field that they had not experienced before.

Profitability problems followed by revolutionary changes:

According to a consultant report, historically, Local Four was a retail commercial bank. It had a severe profitability problems in the early eighties. As a result of the bank's large losses, revolutionary changes took place within the bank. New board members were assigned from representatives from the shareholders' banks, a new top management was assigned, and more experts were recruited, among them the new IT manager. These changes brought with them new ways of thinking and doing. The bank's openness to the consultants' reforms was one of these revolutionary changes. Some of these reforms are described below:

Change in the IT arrangements:

The IT manager became part of the bank's strategic apex. The head of the IT department became the Assistant General Manager rather than a senior general manager. He became an integral part of the top management committees, through which his vision was communicated without any filters.

Dependence on committees in shaping the strategies:

The bank depended on steering committees in which representatives from the different units of the bank participated and in which decision making became more of a collective process than a 'one-man show'. The more significant the strategies were, the higher the rank of the participants in the committees. These arrangements were not common in the bank before 1989.

Identification of business goals:

The formal formation of business strategies enabled the bank to define in a more precise manner its business goals and markets which were previously blurred to the bank.

Shift in power towards the business units representatives:

The new arrangements that were brought to the bank, shifted the power for IT adoption to the business unit representatives. Even for infrastructure issues, the assessment of the functionality of these new systems was left to the users. The new arrangement destroyed the old culture, which had perceived IT as the concern of the EDP manager alone. As described earlier, the ad hoc committees were chaired by representatives from business units, when the IT projects were related to their business, and the IT representatives within the System Steering Committee were restricted to giving advice rather than having a vote on what system to adopt.

> ".. we changed the role.. in the past we were thinking that nobody understand the technology except ourselves.. whenever there was something related to the computer, we had to decide. This was wrong, you should give the user what they want...' IT senior manager.

Cultural Gap within the bank:

The IT senior manager, who had previously headed the IT department, told about tension between him and the top management. He said that before the reforms of 1989 and the invitation of the consultants to help in formalising the bank's strategic plans, top management was sceptical about his directing of the bank's IT scene, although none of the top management had the expertise to assess what he was doing. As mentioned earlier, the IT strategy before 1989 was a one-man-show in which the IT manager was the product champion for the bank. There was a wide gap between the IT manager and top management before the reforms took place in 1989.

The symptom of this gap in understanding between IT professionals and top management was represented in top management rejection of some IT systems that they had to approve due to immediate threats in the environment. For example, the proposal

of a disaster recovery system in the bank by the IT manager was considered to have no relevance to the bank's immediate competitiveness and hence was rejected. However, the crises of the Gulf war in 1990 made the top management re-evaluate their decision and adopt the disaster recovery system, but not until after the crises. Another example of the gap between the top management and the IT manager was the bank's rejection of the EFTPoS system. The senior IT manager approached the top management for approving the introduction of the EFTPoS, but they rejected his proposal. However, when the bank's main competitor, Local Five, started working on its EFTPoS system, the bank rushed to adopt the EFTPoS. The IT senior manager gave more examples of the gap that existed between him and management, such as the resistance to adopting Base 24, which came, this time, from the board of directors. The senior IT manager attributed their resistance to their fear that Local Four would surpass the other banks that they belonged to.

The bank recruited an American IT manager who had worked previously with Chase Manhattan bank and accepted his judgement. The formal IT manager said that, when the bank asked him to evaluate what it had done, he approved their previous developments, which eased the tension between the previous IT manager and top management.

The above anecdotes indicate the cultural gap that existed between the bank's top management and the IT manager. This gap delayed the adoption of some IT products which the bank developed at a later date due to competitive pressure, or put the bank in a critical position, such as not having a disaster recovery system when the Gulf crises occurred.

Committees to bridge the gap between the technologists and the business managers:

The IT senior manager, as well as the other informants, claimed that this gap between the technologists and the management of the bank narrowed after the reforms within the bank and the formulation of the steering committees. Through discussing their strategic

311

goals both parties approached a mutual vision. Nonetheless, the credit marketing manager argued that the cultural gap between the technologists and the business units also depended on the characteristics of those who participated in these committees:

> "... I think it is through the process of SSC we deal with each other on a frequent basis. We try to understand and bridge the gap between what the business wants and what the IT can deliver. Of course, I have to qualify my statement.. it always depends on the individual involved. Some individuals will be interested in what happens in technology and how it works and the concept behind it and some might not be interested.." Credit marketing senior manager.

Problems that affected the bank's IT strategies:

Regulations:

The informants argued that the market was highly regulated and because of that they could not fully exploit their excess IT capacity to gain a competitive advantage over the other banks. They gave examples of the interference of the regulatory body in their proposal to run the shared ATM network, and their inability to install stand-alone ATMs without the need to open a branch. The informants claimed that some of their initiatives were delayed due to the regulatory processes that had to go through before launching some of their products.

Limited number of exhibitions and training programs:

In formulating his visionary strategies, the senior IT manager depended on the vendor. seminars, workshops and exhibitions that he attended. He claimed that these were not run frequently enough in the Gulf to expose the bank to the latest technologies and hence it may lag behind as compared to the other advanced markets. Moreover, he aired his concerns about the high cost of training in the field of IT for the top management which could hamper the banks from investing in these training courses.

The tenure of the expatriate managers:

The senior IT manager argued that the short tenure of the expatriate managers affected the quality of IT strategies. He claimed that the expatriates did not have an interest in long-range planning for the bank. Their plan horizon extended only as long as their contracts.

Achieving a mutual understanding:

Bridging the gap between the IT representatives and the management had been a major problem in the past, the IT senior manager claimed. However, he argued that this gap had been narrowed with the new reforms that took place within the bank.

Local Bank Five (L5)

Introduction:

Local Bank Five (Local Five) is one of the largest banks in the country, which has one of the largest branch networks, and in terms of its domestic operations, it owned the biggest portion of the market share in 1992, around 32%, according to a consultant report.

I interviewed six informants within the bank. The first informant was the corporate strategic planning senior manager, an active participant in the bank's corporate planning activities reporting directly to the CEO. He joined the bank in 1988. Prior to that, he had worked with some European companies through which he claimed that he had gained considerable experience about strategic planning. The informant is an Indian and has an MBA. The informant said that he had participated in the development several key products, some of which were IT based.

The second informant was the assistant general manager (AGM) for IT, a Bahraini in his forties. His work experience had been with the computer divisions of two non-banking organisations prior to joining this bank. His education background was an HND in computer studies and an MBA which he had acquired while working at the bank.

The third informant, a Bahraini national, headed the corporate services department and was in charge of the financial control, the general services and the human resources units. He had been with the bank for 15 years during which time he was promoted through different positions, to his present rank of an assistant general manager. The meeting with him was the shortest, taking only half an hour.

The fourth informant headed the corporate banking unit, and had worked with an international bank before joining this bank. Her education was in business

administration and she had had 15 years of banking experience. This informant preferred that I take notes instead of tape recording the interview.

The fifth informant headed the commercial banking unit. He had worked with an oil company as a programmer, then worked with Chase Bank in 1976 for one year before joining this bank as the head of the EDP department. In 1982, he was transferred to head the corporate banking division. His rank was a senior manager.

The sixth informant was deputised as the head of the consumer banking unit and was ranked as a manager. He has been working with the bank for 12 years, although his educational background was in marine biology.

Business focus:

Factors affecting the competitive environments:

The senior manager of strategic planning unit described the Bahraini market as being overbanked, with many commercial banks active within a small market. The economy was highly dependent on oil prices and political stability within the Gulf. A large portion of the banks' business was made up of trade, which highly affected by these factors. The banks, this informant claimed, became more conservative, or to use his vocabulary ".. *have the tendency to pull their plugs..* " and support the trade sector less when the economy was not doing fine.

Sensitivity to price and interest rates was a salient factor that affected the competitiveness of the participants in the banking industry in Bahrain. The informant mentioned that corporate clients were more sensitive to interest rates than retail clients. The former clients tended to switch to other banks with more competitive interest rates. The consumer clients, in contrast, were more sensitive to the flexibility of loan terms and the amount of the loan that each bank offered rather than interest rates.

Information technology and systems were amongst the issues that the informants mentioned as affecting the competitive environment. They perceived different roles that IT played to the banking businesses. For example, for retail business, the informants perceived IT as playing a vital competitive role, whereas for corporate business, they perceived delivery systems as having a minor effect on creating new business for the bank.

To summarise, the following are the factors that the informants talked about as affecting the bank's business:

- pricing;

- services and quality of services;

- financial strength;

- confidentiality;

- branch network;

- international network; and

- systems.

Business focus:

The bank operates at the domestic level as well as the international level.

At the domestic level the bank organised itself into three business units to serve different distinct market segments. These business units are as follows:

- Consumer banking unit. The unit provides a full range of retail services such as current accounts, money market accounts, savings accounts, time deposits, personal loans, debit and credit cards, remittances and unit trusts.

- Commercial banking unit. This unit provide its services to the small and medium-sized businesses with an annual sales turnover of US$5.3 million or less. The bank subdivided this market into construction, trade, real estate, and services sectors.

- Corporate banking unit. The unit provides its services to domestic and multinational institutions with an annual sales turnover of more than US$5.3 million. For each of the bank's corporate clients, there is a relationship account officer.

At the international level, the bank organised itself into four units which are:

- Investment advisory;

- Treasury and capital markets investments,

- Trade finance and financial institutions group; and

- Foreign branch unit.

More about the circumstances that led to developing these business units will be mentioned when the bank's business strategy formulation is discussed.

Perceived role of IT within the bank:

Traditional role of IT - automating the bank's processes:

The informants talked about the historical role of IT which had started by automating the bank's accounting records and functional areas.

Product delivery:

The role of IT expanded to support the bank's product delivery. IT was deployed for this task within the boundaries of the bank.

IT as a competitive and a defensive measure:

The bank's IT initiatives were driven by the bank's willingness to achieve competitive superiority over its rivals or to defend its market share from deteriorating. The new perception brought about a transformation to a phase in which the bank mobilised its systems differently in order to achieve the new role.

Delivery beyond the bank's boundaries.

Figure 1 describes the new role of IT, extending beyond the bank's boundaries. The senior manager of the strategic planning unit argued that this new approach of extending IT based services beyond the bank's boundaries aimed at creating a co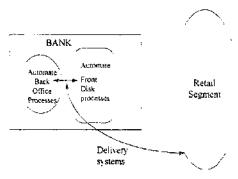mpetitive advantage, enabling the bank to expand its market share and add to its customer base share. The new IT delivery systems aimed at enabling the clients to interact with the bank's systems directly

Figure 1: Extended role of IT beyond the bank's boundaries

without the intervention of the bank's staff. With the new approach, the bank aimed at providing convenient services to its mass market - the consumer banking market - while attracting more customers and protecting the existing market share at the same time. The informant mentioned phone banking, the EFTPoS and its debit cards, and ATMs as the technologies beyond the bank's boundaries. Some of these technologies, i.e. the EFTPoS and the debit and credit cards, were employed to generate commission revenue to the bank.

Enable product delivery to the international markets:

IT was perceived as enabling the bank to support its international business without having a physical presence in the international markets.

Support branch network:

The bank embarked on creating the largest branch network in Bahrain. The senior manager of strategic planning perceived the large branch network as a means for securing a larger share of the retail business, which he attributed to the customers' banking habits. He expected that the retail customers would continue to visit the branches to conduct their banking business. The informants perceived IT as the means for enabling them to maintain and expand their branch network.

Ingredient of quality service:

Quality of service was one of the factors that the bank mentioned as affecting their competitiveness in the market. The senior manager of strategic planning perceived IT used in this context as a means for increasing the bank's market share. He said that, in a declining interest rate environment, the banks have little room to manoeuvre in providing competitive interest rates. What they could do, however, was to differentiate themselves in terms of quality of service. The informant gave an example of the telephone banking system that was introduced to provide better service to retail clients.

The head of the commercial banking unit perceived IT as a tool for enhancing the bank's productivity which, in turn, was linked to its competitiveness. With the current arrangements in his department, the informant could not serve his clients on the spot and hence risked losing them.

Maintaining the bank's leadership and Institutionalising new approaches to the market:

IT was perceived as a tool for keeping the bank in the leadership position compared to its rivals. The informant gave an example of the EFTPoS, which the bank introduced just a few months before its main rival, Local Four. The senior manager of the strategic planning unit argued that the EFTPoS was not as popular as other retail technologies in Bahrain since it was a new concept for the customers, who were more cash oriented. However, there was a growing trend toward using the system. The informant claimed that they were institutionalising new banking habits in the Bahraini market, and once the bandwagon had gained momentum, they would expect to reap the benefits of being the leaders in this type of business.

Different strategic roles for the different business units:

IT played a different strategic role for the bank's business units, based on the informants' accounts (*Table 1* summarises the perceived role). The bank invested heavily in deploying IT for its retail banking business. The delivery systems that the senior manager of the strategic planning unit talked about were all deployed to retail business. IT aimed at handling the mass of clients, on one hand, and, on the other, creating a revenue for the bank through the commissions earned from some of the delivery systems.

> ".. introducing the EFTPoS, the phone banking, and the ATMs, will generate more income to the bank.. Mainly we use IT to generate income to the bank, we use IT to speed up our service to the customers, we use IT to save cost..". The consumer banking manager.

In contrast to the consumer banking retail business, the delivery systems played minor roles, if any, in the commercial and corporate banking units. The commercial banking unit manager perceived the majority of his clients as not sophisticated enough to interact with the delivery systems. Accordingly, he did not perceive a strategic role for the delivery systems that went beyond the bank's boundaries in generating more business in this area. There were no delivery systems directed at the corporate segment for the time being. The heads of the commercial banking unit and the corporate banking unit argued that direct personal selling and efficient relationship marketing teams had more potential to generate business than IT delivery systems. The commercial banking senior manager argued that IT could play a crucial role for supporting the quality of services provided by his business if it was deployed internally.

> ".. in our area, we are handling commercial accounts and we are dealing with unsophisticated people. Small merchants in the market.. they don't know about accounts, they don't know about the balance sheet, but they know one thing, they know about their business, they know they have to import and sell the goods, they don't know exactly how much money they are making.. technology here in commercial banking will not have a major impact. It is an internal tool. It is not an external tool. Our edge is not through technology, our edge is through extensive calling, the quality of marketing officers we have, and how much confidence they achieve with the client.. you have to know that some of the clients are uneducated.. in my case there is nothing to do with technology unfortunately.." The commercial banking senior manager.

The international and treasury banking unit embarked heavily on IT. The strategic planning senior manager perceived IT as an enabler of the bank's international operations.

Table 1: Perceived roles of IT to the business units

Business Unit:	Role of IT
Consumer banking	- competitive advantage through delivery systems; - generate commission revenue not subject to the fluctuation of the interest rates; - manage processing big transactions of the mass market; - control cost.
Commercial banking Corporate banking	- minor role for the delivery systems for generating business; - no, or very limited delivery systems introduced to customers; - dependence of direct selling efforts as a means of generating business; - future potential for the delivery systems; - deficiency of the current internal IT systems in supporting the internal processing; - competitive edge through deploying IT internally to improve the internal processes and productivity, and provide quality and prompt service to clients - role of the new IT systems.
International and treasury unit	- Enable operations in treasury and international business; - electronic links through EDI systems with correspondence banks; - on-line systems providing information about capital and stock markets; - strategic role of the information provided by the IT systems.

Ephemeral nature of IT and isomorphism between the banks:

There was a tendency of the banks in Bahrain to react similarly with regard to banking products and technology systems, the informants argued. This behaviour among the banks created an ephemeral competitive effect on the adopted IT systems.

> ".. ATMs.. I think it is a generic product now, everybody has. The same thing with telephone banking..

> .. if we invest in a system today for one million dinars, Local Four is more capable, they will go and spend two million dinars, Local Three will spend something, it can be copied..

> Q. Is the bank similar or different than other banks in the way it uses IT?

> A. I think currently.. just similar, I think that everybody is doing the same thing. currently banks are not competing on technology.. it is becoming too common.. it is becoming so standardised that everybody has the same thing. they may have a different brand label, but they offer the same thing.." Senior manager of strategic planning unit.

> ".. I think that we were all moving in the same way because that was the trend internationally, and now, these are not special systems and they are service based systems.. there is a specific trend and everybody works toward that.. they (the banks) were all going through the same phases, but there was this lag period.. for the ATMs it was 3 or 6 months, and for the EFTPoS two or 3 months, and the phone banking, it was one year something like that.. but they were all having the same ideas in mind.. may be the way it was designed differs .... I don't think that we are different than the others.." IT AGM.

> ".. we have competitor banks that wanted to do exactly like what we have done, not after one year, but after five years, they saw us doing well and they wanted to copy us.. we are watching some other banks but at the same time we are used as the criteria, they watch us more than we watch them, we tend to be the leaders, of course there are certain things that other banks surprised us with.. you have to react.." Commercial banking senior manager.

The senior manager of strategic planning mentioned that the banks' dependence on 'off-the-shelf' systems helped create a homogeneous environment amongst the banks.

Main IT developments within the bank:

The automation within the bank started in the early seventies with NCR ledger posting machines. The branches were not integrated until 1980. In that year the bank bought a system from an American bank. The system served the retail banking business but lacked the support of the other business areas within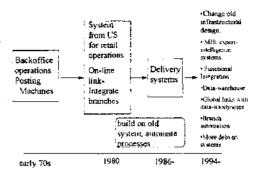 the bank, so the IT department developed other systems to meet the operations' requirements of the other functional areas. However, due to the limitations of the old system, the different functional areas were not fully integrated with each other. The heads of the commercial banking unit and the corporate banking unit expressed their dissatisfaction about their IT systems. More about this issue will be discussed later.

Figure 2: Main IT developments within Local Five

The bank introduced its Visa card in 1986, the ATMs in 1987, and in 1990-91 the phone banking system, followed by the EFTPoS. All of these systems were introduced simultaneously with the bank's main competitor, Local Four.

Figure 2 lists the expected IT developments that were planned to take place within the bank, as described by the informants. These are listed below:

- change the bank's IT infrastructure;

- adopt more intelligent MIS systems;

- integrate isolated functional areas;

- introduce LAN and automate the offices;

- create an accessible and integrated data warehouse;

- link on-line to global information databases;

- support branch automation; and

- develop more delivery systems.

Deficiency of the old system:

The systems that the bank had at the time this field work took place were fifteen to twenty years old, thus were not capable of supporting further improvements. To quote the IT manager:

> ".. in the strategy, they say that .. we want to improve our delivery at the branches, we have these old machines.. either we change our system or improve it. We told them that we can't improve it because this is the maximum limit.. the answer is to replace the system.. we can't support for more than one year..".

The informants in the business units expressed their dissatisfaction, though indirectly, about their IT systems. Lack of integration with the other staff working within the same pool, lack of sufficient analytical tools, lack of on-line information related to the financial markets, and lack of on-line access to the needed information within the bank were limitations that the business units faced and hoped that the coming systems would improve. To quote the commercial banking senior manager:

> ".. in our case we need to be able to interact between the marketing officers.. between the databases. Our database at the computer systems need to be enhanced to be able to provide us with the information that we require, some market analysis needs to be added to the system to come up with market intelligence.. it is nice to have them available, it would reduce your hassle in going back and forth and waiting for that information and calling back the customer ..right now I have to go to the time deposit department to see what is the best rate, if somebody asked me .. 'shall I buy sterling pounds?' if he asks me today, I expect to press a button and see what the trend is in the sterling, the general direction.. the expectations.. the factors that affect the increase or decrease, a kind of an intelligent answer.. that builds the trust, and here we gain more advantage over the others..".

Drivers of IT strategy:

Competition the main driver to IT initiatives:

The main driver for IT initiatives according to the IT manager was the competition. The senior manager of the strategic planning unit shared the same views with the IT assistant general manager and added to competition the bank's desire to be a leader in the market.

> "Q. What were the reasons for embarking on the systems that the bank have?

> IT manager: One reason only. Competition. With no competition, people will not move." IT AGM

> ".. I think the biggest driver of the bank's IT strategy is our mission statement. Because in our mission statement, it is stated that we want to be a leader in technology in Bahrain.. the second driver is the competition itself.. If we are lagging behind for a given reason, the competition forces us to look at our strategy and take action based on that.. Sometimes we do it on a proactive basis and in others we are forced to take actions.. I would say that the two main drivers are the competition and our mission statements.." Senior manager of strategic planning.

Revamping the system is driven by the competitors:

According to the IT manager, the overall renewal of the bank's IT system was also driven by the competitors:

> ".. as in any other organisation. there is this life cycle. we are away behind our system life cycle.. again, it is because of your competitors, not because you have to, but if your competitors have more advanced technology and it is getting very rapid improvements in terms of productivity, functionality of hardware and software, the system that we have is twenty years old and we have to move from there.. we are reaching a point where the support will not be given to the hardware {by the vendor}.." IT AGM.

Other drivers:

The informants talked about other factors that were relevant to their IT initiatives, some of which were discussed in the perceived role of IT section. The following is a list of these factors:

- business strategies;

- improving efficiency, productivity, integrating internally with the others;

- improving and initiating more delivery systems;

- improving the bank's MIS and introducing other intelligence systems;

- improving the quality of services through re-automating the branches and offices;

- "revamping" the bank's IT systems; and

- automating the manual processes.

Rivalry, regulatory control and collaboration.

As competition was the main driver to the bank's IT initiatives, rivalry between this bank and its immediate rival, Local Four, was also the main obstacle that delayed the introduction of a shared ATM network in the country. Local Five perceived the initiative of Local Four to launch a shared ATM network as a threat to its competitive position as one of the two largest banks in Bahrain. It perceived the market in Bahrain as too small to support a switch network run by more than one bank, and felt that Local Four would enjoy a monopolistic power if it managed to introduce the network in the market based on its terms. In addition, Local Five was embarking on creating a large branch network as a means to strengthening its market share. Only Local Four was able to compete with Local Five on the branch network base. The creation of a shared ATM network in Bahrain by Local Four was perceived as a threat to the strategic advantage Local Five enjoyed from the branch network. Accordingly, the bank protested to the regulatory body, which interfered and proposed running a shared ATM network controlled by the central bank rather than by a given bank(s).

".. the first problem with the EFTPoS.. the banks were unwilling to come together to have a common switch, because the fear was if there is a switch, you give up your customers to your competitors..

... the problem is that whoever has the switch, there is no doubt he will command the control basically, and very few banks would give up to that position, and that is why the regulatory body stepped in..

.. a project like the 'switch' in a country like Bahrain is good to be handled by an agency, that creates the least favouritism and bias.. I would support it. That is the only way that all banks will do it simultaneously.." Senior manager of strategic planning unit.

The race for the EFTPoS system and the external regulatory interference:

Rivalry between Local Five and its main rival Local Four was also present when the informant talked about the EFTPoS system and the circumstances in which the bank launched its system.

According to the Local Five account, the bank wanted to launch its EFTPoS system but the regulatory body slowed things down. However, their main rival, Local Four, had got its system and was prepared to introduce it in the market, so, Local Five protested to the regulatory body. Accordingly, the Local Four system, was also delayed, and the two banks introduced their system simultaneously. It is worth noting that neither of the two EFTPoS systems was linked to the other.

Strategic planning within the bank:

The first formal strategic plan was produced by the bank in 1986-87. The consultant, Arthur D Little, was the main articulator of the strategic plan. Everything was done with the aid of the consultant until the strategy was ready for implementation when the bank took over the responsibility of control.

Before 1987, the bank did not have a clear objective as who to serve, what and how. Relationships formed the basis upon which the bank's business was built. To quote the senior manager of the strategic planning unit:

> ".. we used to go after the mass market, we just go.. we never understood our homogenous groups. There was nothing like consumer banking, nothing like commercial banking nothing like high worth individuals. There was only relationships..."
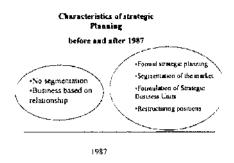
Characteristics of strategic Planning
before and after 1987

- No segmentation
- Business based on relationship

- Formal strategic planning
- Segmentation of the market
- Formulation of Strategic Business Units
- Restructuring positions

1987

Figure 3: Changes in Local 5 approach to strategic planning

A period of change began in 1987. Market conditions changed, with oil prices declining, which had had a direct negative effect on the local economy. In turn, these negative effects, according to the senior manager of strategic planning, spurred the bank to embark on its strategic planning exercise:

> ".. in 1987 we felt that the bank had had some degree of stagnation and the board of directors felt that we must do something more radical to generate more return basically. That was the need basically. The bank has stagnated...".

The consultants played an important role in creating a revolutionary change within the bank.

The strategic planning exercise defined the bank's market based on the customers' homogenous characteristics (see Figure 4). With the definition of these segments, the bank changed its structure. It formulated its strategic business units (SBUs) which were headed mostly by internal recruits:

Treasury

Consumer Banking Unit

Corporate banking Unit

Commercial Banking Unit

IT - On-Line connections with systems providing information about international markets. Evaluated in 1991 strategy

IT - Delivery system support mass market transactional needs

MIS upgrading 1994 in house automated processing. Personal connections and Marketing
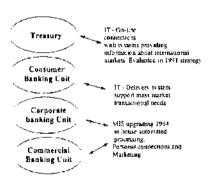
Figure 4: Formulation of SBUs in 1987 strategic plans

"..so the biggest thing that we achieved between 1986 and 1987 was defining these strategic business units and controlling it, measuring the performance and the profitability.... today I can manage each business unit very well by product line and by customer type. This helps me because today I am in a position to eliminate or modify services. I need to arbitrarily go and say just drop this customer. Don't keep customer x who may be eligible for a personal loan but not a business loan... that was the biggest change that the strategic strategy brought about... the formulation of the strategic business unit focusing, targeting, tailor made delivery to specific needs of each group.." Senior manager of strategic planning unit.

The formulation of the bank's strategies:

The bank follows formal procedures for the development of its corporate plans. These procedures were highly influenced by what the bank had learnt form the consultants who sat the process at the very outset of the bank's strategic planning exercise in 1983. As the senior manager of
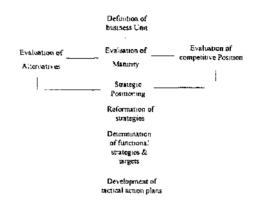
Figure 5: Strategic planning framework

strategic planning described, it was a top-down process from the board to the strategic planning committee then to the ad hoc committees. The model in Figure 5 describes the strategic planning process as followed by the bank's SBUs.

Role of consultants:

As mentioned previously, the consultants, played an important role in providing the bank with the required know-how to formulate its strategic planning process. From 1983 up to 1991, the bank depended on the consultants in formulating its plans. However, after 1991, once the bank had acquired the know-how and developed expertise in this area, it depended on itself for formulating the plans.

".. the bank did their 1983-87 plan and 87-92 by Arthur D Little... they conducted the profiling session, wrote up the plan, and gave it to us to implement... But basically when I came to the unit I said that we should not hire outsiders because... basically what they do, they can't come and create something by their own, they have to speak and understand, they have their methodology ..

to tell you what to do, but the source of information inside the bank. So we said why don't we do our planning by ourselves..". Senior manager of strategic planning.

The bank's dependence on its internal resources in formulating its strategies improved its learning curve, the senior planning manager argued. The bank continued its contacts with the consultants. These contacts formed a source of vision about the changes in the environment either within or outside Bahrain. The informant told me that the bank had been visited few days ago by KPMG to give an update on some studies about IT systems in Australia.

The corporate strategic planning unit:

The corporate strategic planning unit was responsible for the formulation of the bank's grand strategies.

> ".. in terms of responsibility, this unit is responsible for long range planning, three to five years. Generally, the corporate planning unit is involved in all global business and non-business issues of a policy feature.. once we plan, the control of implementation is with the corporate planning .. the corporate planning responsibility is to oversee the whole thing and make sure that it is in line with what we have visualised in the plan and if things are not as in the plan then the senior management is involved so that appropriate modification can be made..". Senior manager of strategic planning unit.

The corporate planning unit also played a part in the development of the bank's products and services through participating in ad hoc committees with the concerned business units. The aim of their participation was to ensure that the business units would act in line with overall corporate strategies.

Formulation of IT strategy:

Committees for the formulation of the strategies:

The IT strategy, based on the IT AGM's account, was built basically on the business strategy (see Figure 6). The IT strategy was formulated every five years, or whenever there was an overall corporate planning exercise within the bank. To quote the IT manager:
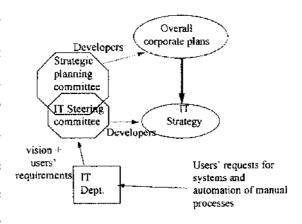

Figure 6: IT strategy formulation in Local Five

".. we build our strategy on the business strategy. There is a business strategy that the bank sets every five years, our job is to take that strategy and come up with a system strategic plan that is aligned to the business plan.".

To make sure that the IT manager fully understood the IT needs of the business plans', he was invited to participate in the corporate planning exercise, but as an advisor rather than a decision maker, according to the IT manager. He did not have any power to influence the business plans of the bank.

As shown in Figure 6, the bank depends mainly on two committees for formulating its corporate strategies and IT strategies. The formulation of the bank's corporate strategies is centralised within a committee in which the CEO, the GM, and the head of the business units play an active role in defining the bank's strategic thrust. From this committee, a smaller committee called the IT steering committee is formed. In this committee participate the CEO, the GM, the IT AGM, the corporate services AGM and the senior manager of strategic planning.

The responsibilities of the IT steering committee are to ensure that IT strategies are aligned with the bank's corporate strategies and to follow up on the implementation of the strategies.

The heads of the business units do not participate in this committee. However, their requirements are communicated to this committee which has the power to accept or reject any of their requests.

For the implementation of the IT initiatives, the bank formulates ad hoc committees which include participants from the concerned business unit, the IT department and other support units.

Impetus of IT strategies on the macro and micro levels:

A top-down approach:

The IT manager differentiated between the macro and micro impetus of the IT strategic thrust (see Figure 7). At the macro level, the business plans mainly guided the major IT initiatives within the bank.
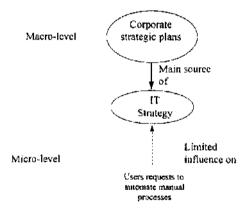
Figure 7: Impetus of IT strategic thrust at I.S

".. there is only one strategic plan that
we have which is the business strategic plan, and everybody participates in that from the CEO, GM, AGMs and head of units..". IT AGM

".. what we don't have in IT, we don't bring it from the grass roots, IT is always being done top down..." senior manager of strategic planning unit.

To a lesser extent, users' requests and complaints:

At the micro level, which is marginal in its effect on directing the IT strategy as compared to the macro level, the users' requests and complaints were a driving factor for enhancing the systems. The IT strategy, at this level, is concerned with automating the manual processes that the bank's old core system did not serve:

> ".. the automation of the various operations, that is a major contribution. We go and automate the different areas, the different operations, the different manual transactions..". IT AGM

> ".. some times we need things to be automated, we don't want to do things manually, to give you an example, recently we started to charge an amount for those who are not paying on time. Instead of doing it manually, we asked the IT people to automate it.." Consumer banking manager.

Impetus from IT manager for infrastructure projects:

The impetus for IT strategy comes sometimes from the IT department, as Figure 6 indicates. The product champion for these projects relating to the infrastructure of the bank's IT systems is the IT AGM. Due to the technical nature of such projects, his vision about the architecture design of the IT scene within the bank is taken in account. For example, the office automation being implemented at the bank was driven by the vision of the IT AGM.

Role of the IT manager in IT strategy formulation:

As mentioned above, the IT manager is the product champion for any IT initiatives of an infrastructure nature.

In addition to that, the role of IT manager was to support business goals through implementing the needed systems described in the business plans (see the appendix at the end of the case for example of IT systems supporting the business plans).

His role in the strategy formulation process was restricted to understanding the business goals, but not leading them. He was a 'listener' in the business strategies formulation committee, with no power to influence the business goal formulation.

> ".. we build our strategy on the business strategy. There is a business strategy that the bank sets every five years. Our job is to take that strategy and come up with a system strategic plan that is aligned to the business plan (....) we get involved in the business plan discussion and so on, but we don't have a separate process to come up with a strategic plan (....) so the business says that we want to enter into the card system, so it is finished. Our strategy is to have a proper card system to be used at the time and date requested in the business plan..
>
> Q. Do you participate in the initiation of the business plans?
>
> IT manager: we participate but as a listener (.....) the business is set by the business people. We just participate to get acquainted and to understand the business issues and concerns rather than just read a report..." IT AGM

The senior manager of strategic planning described the IT manager's role as reactive to the bank's IT needs. He anticipated that this role needed to change and become a proactive one as IT became more complex and hard to the business people to grasp (more about this topic will be discussed in the culture section).

Role of the senior manager of the strategic planning unit:

Some of the IT-based systems were initiated and directed by the senior manager of the strategic planning unit. A major project was the telephone banking system, an initiative for which the senior manager was the project manager. His role was to define the customers' needs and then articulate the solutions provided by the system to meet these

needs. The informant mentioned that the role of the IT department in this project was to translate the goals that they defined into 'a machine language system'.

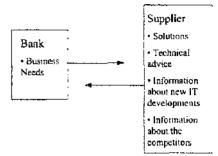# Relationship with the suppliers:

The bank had maintained a long relationship with NCR. As mentioned earlier, Local Five progressed with the mainframes supplied by NCR. The ownership of NCR was taken over by AT&T and with this transformation, the old relationship between the bank and NCR extended to the new owner, AT&T.

The supplier as an informer to the bank:

AT&T played the role of the informant about the recent developments in the IT environment and their potential implications for the bank's business[1]. The informant role that the vendor played was either through contacting with the bank directly through his account manager, or through seminars, consultants' visits, and exhibitions that the bank was invited to. The senior manager of the strategic planning unit added that the vendor was also a source for informing and updating the bank about its rivals' latest IT initiative trends.

---

[1] This claim was made by the bank's vendor when I interviewed them.

Figure 8 summarises the role of the supplier to the bank. The bank may discuss business goals it wants to achieve with the vendor, and, in return, the vendor may provide the bank with possible technical solutions for achieving these goals.

```
┌──────────┐            ┌─────────────────┐
│ Bank     ┊            │ Supplier        │
│          ┊            │ • Solutions     │
│ • Business ┊ ───────► │ • Technical     │
│   Needs  ┊            │   advice        │
│          ┊   ◄─────── │ • Information   │
└──────────┘            │   about new IT  │
                        │   developments  │
                        │ • Information   │
                        │   about the     │
                        │   competitors   │
                        └─────────────────┘
```

Figure 8 : Relationship with the supplier

".. we are in touch with our suppliers who are leaders such as AT&T. They keep us very well informed of all the developments. Local Five is the first target (...) because they can use us as a reference site. For any technology in banking, they try to sell it to us, because if we sell it to you we can say that Local Five has bought it so it becomes a good reference site for themselves.

Q. Do you have a close relationship?

Senior manager: very close relationship. I said close relationship by virtue of our leadership. The suppliers themselves are interested in telling us what developments are taking place and where we are lagging behind. So we are well addressed. But they don't force us to make a decision. (....) they meet banks more than we do, so they tell us what is happening there, so they are a very good source for information on the competitors activities..." Senior manager of strategic planning.

Relationship between the business strategies and IT strategies:

IT supporting business plans, not directing them:

According to the informants' accounts, the business strategies capitalised on the IT strategies. The business plans gave sense and direction to the IT strategies, and the relationship between the two did not go any further than that. The latter did not have influence on shaping the bank's business strategies, the informants argued. This relationship between the two was represented by the participation of the IT manager as a 'listener' rather than a key player in the business strategy formulation.

".. the key players in the strategies, are senior management from the CEO, the GM, the Deputy GM and then the business units heads..

Q. How about the IT AGM, is he there?

Informant: No he is not a major player in the business strategies as such. We are not that much expanded in IT. It is still treated in our organisation as a support unit (....) to deliver this product or service or expectation. Basically when the business plan comes, a copy will go to the support units. Every support unit will see what is required from its end to be able to meet the overall business plan of the bank..." Head of the commercial banking unit.

Different type of relationship with the different business units:

Current strategic links:

The relationship between the bank's business strategies and the IT varied, depending on the type of business. As to consumer banking strategies, the link between the two, IT and business strategies, was intimate. I managed to get access to one of the bank's strategic plans booklet in which a plan was outlined as to how IT would enable the consumer banking business plans (see the appendix at the end of the case).

Potential for strategic links in the future:

There were no current links between some of the business unit's strategies, e.g. commercial banking and corporate banking, and IT strategies.

".. as far as I explained earlier, the business strategy is designed in isolation, at least I am talking about my business unit. It is done in isolation of the IT strategy (.....) it is not an advanced relationship... where at the initiation stage {IT and us} get together and come up with a strategy.... no, that is not taking place at this stage.." Head of the commercial banking unit.

Nonetheless, the senior manager of the strategic planning unit claimed that there would be a greater potential role for IT in promoting the businesses of the above mentioned units. In the near future, the IT strategies would support the internal IT needs of these business units and at a later stage it was envisaged that they would provide delivery systems which extended beyond the bank's boundaries.

Infrastructure 'bottle-neck':

The relationship between the bank's business goals and the IT strategies to accomplish these goals was weakened by the deficiency in the bank's IT systems. The bank was going into a 'bottle neck' position in which the implementation of IT strategies that were directly linked to the business goals was preceded by a transformation stage in which the IT strategies were concerned with revamping the old infrastructure. Unlike the old infrastructure, the technical aspect of new infrastructure would not limit the implementation of the business-driven IT systems.

> ".. Now I think it is something that you give to the customer, to his home, to his office and you put it on the road basically. For that obviously this system has a limitation, to my knowledge most of the banks have that limitation currently. And every bank has to look at upgrading it or changing it.." Senior manager of strategic planning unit.

> ".. in the strategy they say that we want to improve our delivery at the branches , we have these old machines.. either we change our system or improve it. We told them that we can't improve it because this is the maximum limit.. the answer is to replace the system.. we can't support it for more than one year.." The IT manager.

Bank's culture:

A market leader:

The bank is one of the two largest banks in the country. The informants perceived that their role was to maintain their leadership, which they built over a long period of time. The bank's culture was formed by, and at the same time, supported this perception.

The bank's IT adoption behaviour reflected its perception of their leadership role. To maintain this leadership, the bank was in direct competition with its main rival, Local Four. Both banks' strategies focused on embarking on large branch networks to dominate the market, consequently both banks had adopted the technologies required to support these large networks concurrently. As to the other retail technologies, e.g.

ATMs, phone banking, EFTPoS, and credit cards, both banks adopted these technologies more or less within the same time.

The bank's culture was geared towards supporting innovative products in the market. By doing so, the bank hoped to institutionalise new systems and banking habits in the market.

Consultant directing the cultural change:

To achieve a change in the bank's culture from what it was before 1987, the bank depended on the leadership of the consultants.

The consultants transferred decision making within the bank to the steering committees that they formed. Moreover, they set the ground for formalising strategic plans based on following specific frameworks. To enhance top management acceptance of the formalised strategic planning methods, and to prepare them to continue on the consultants' path, the top management were sent on educational programmes in the States and the UK to acquire higher degrees in management studies. For example, the bank's GM, its IT manager, and the corporate services assistant general manager had all acquired their MBAs while they were with the bank. The head of the commercial banking unit, amongst others, participated in tailored courses at Harvard. The top management were, therefore, more receptive to the formal strategic plans propagated by the consultant.

Change in the role of the IT manager:

There was a consensus among the senior manager of the strategic planning unit, the corporate services assistant general manager, and the commercial banking senior manager about the need to change the IT manager's role from a reactive to a proactive one. Currently, the IT manager's role is reactive, and focuses on supporting the business goals by providing the IT systems stated in the business plans. The informants argued that defining the implications of IT and then applying it to the different

functional areas was becoming more complex and beyond the comprehension of the business units' participants. This would dictate a more proactive role for the IT manager in the process of IT adoption, rather than the traditional reactive role.

> ".. the IT people have to be bankers, they are the guys that should be sensing the needs in the market and providing the high tech. solutions. Because what is happening, technology is becoming so sophisticated that it will be beyond the scope of an ordinary banker to think of solutions because they are very complex.." Senior manager of strategic planning unit.

> ".. by the nature of their jobs, the marketing people or business units' people are not technology driven, they are not technology oriented. They get information about the latest technology from the IT department, the IT department would come up usually with a proposal telling the business units that this is what is available.." Assistant general manager of corporate services department.

> ".. from my experience, many IT departments just do what the users want without adding the creative part and without volunteering ways and means of doing it better, without volunteering to give them more than what is requested by the users.." Head of the commercial banking unit.

Proactive role for the IT AGM:

The new cultural change proposed giving a greater role to the IT manager in business goal formulation by linking his fate with his business partners' fate.

> ".. if you link up the goals of the banks together between the IT and the business units and you make it part of their reward system in the case of the IT.. how much creativity they recommended to promote business .. so the incentive is important in addition to the many other things.. you make the business plan the responsibility of not just the business unit head, but part of it goes to the IT, it is a shared goal, once that take place you see the incentive is clear and you will get ideas.." Senior manager of commercial banking.

To prepare him for his new role as a banker and a strategy developer manager, the senior manager of the strategic planning unit claimed that the bank took action to change the profile of the IT manager from that of a technology engineer with a provincial view to that of a banker, with broader views about his role. As mentioned earlier, business skills of the IT manager were groomed by the courses that he had participated in at Harvard, and the MBA that he had got from the UK.

Perceived need to change the bank's culture:

The informants talked about the change in the bank's culture that was triggered by a change in the external environment. With these new economic changes in the market, the bank perceived a need to change its paradigm about how they get things done.

> ".. cultural change is dictated by the market, a culture is a dictation of a certain situation in the market that lasts for some time and then it reflects on the attitude of the people then it becomes part of the culture. When this environment changes, definitely you need to review the way that you do certain things, the set of mind, the mentality. You need to change all of these things to be able to cope with the strategy or the plan ahead of you, because part of the strategic planning is changing our corporate culture.. (the informant continued by describing the changes in the market place that triggered the change in their culture).. there is a change in the market situation, the shrinking size of the market, the increasing number of players, and competition, customers being aware of the hunger of banks for business, and they are taking advantage.. we need to make a paradigm shift .. which is to move away from your existing paradigm.." Head of commercial banking unit.

Creating a cultural change:

The senior manager of the strategic planning unit perceived IT as ephemeral in its nature since it could be copied easily. However, he perceived achieving a sustained competitive advantage as possible through the bank's ability to provide quality service, which is, in turn, intimately linked to the bank's culture (see Figure 9). The informant defined four variables within the bank's culture that, once altered, would affect the quality of the bank's services. These factors are the processes and procedures within the bank; the amount of controls affecting the front line autonomy and ability to
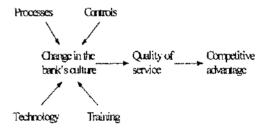

Figure 9: Vision about cultural change

make decisions; the availability of the right technology; and the availability of appropriate training.

> "..{IT} can be copied immediately, it is all 'off- the-shelf' these days, you can't have a proprietary right of IT, but on service, it is a culture. You change the culture of the people, nobody could acquire it...

> ... for the cultural change, the target is the people... and all our ingredients will be procedures, technology and controls. We have to change these things, we have to fine tune. Here the guy will change. Give him more authority, give him more training.." Senior manager of IT planning.

A cultural gap between the top management, the IT department and the head of the business units:

Power to influence IT strategy:

The head of the corporate banking unit said that the power to make decisions that influence the bank's IT strategies was centralised with the CEO, GM, senior manager of strategic planning, and the assistant general manager of corporate services, who set the bank's corporate plan, decide what goals need to be achieved by the business units and decide whether IT will be used to support these goals. The heads of the business units provide their suggestions and recommendations as regards the IT systems that they need. However, they lack the power to enforce their views. The lack of influence of the business units heads over the IT strategies affected the support that IT provided to their units.

> ".. we don't have a great influence on IT at this stage. We only submit our requests to be accommodated to the IT. But at this stage we are not in a strong position to influence the direction of projects or assignments.." head of the commercial banking unit.

Communication, team work, clear priority and top management support ingredients to the gap:

The head of the commercial banking unit pinpointed the areas that he felt needed attention. He perceived both the business units and the IT departments as complementary to each other; the users may have requirements that the IT department

343

may not be aware of, and the IT department may be aware of a system which has an implication to the business units which the business units are not aware of. Currently, the communication between the two entities was not at its best, to paraphrase the informant. Moreover, attention from the IT department, joint team work with the business units, and a clear mandate from the top management to the IT department were needed to overcome the IT support problems.

> "... it is two sided. One is that I have a requirement that the IT people are not aware of, two the IT have a service that is good for me that I am not aware of. So through proper communication, which at this stage, is not at its best, to be frank with you here, it is not at its best....

> .. I need as a unit head to know the potential and capabilities of what IT can offer me to promote my business. The IT would like to know my exact mission, what is it I am after, what business I am in as a unit. If that understanding is clear for both parties.... and not only that there should be dedication from the IT department.... (...) they may understand each other and the IT man knows exactly what it takes to help that business unit to achieve its goals, but he is not interested. he does not have the instruction he does not have the resources, he does not have the time. priority is not clear....

> Q. In reality is that what is happening?

> Informant: I gave you what is the optimal situation. How much of it is done at our level, I think it leaves a lot of room for improvement.." Head of the commercial banking unit.

Case appendix: Quotation from the consumer banking strategy booklet showing the relationship between the business goals and IT systems:

"The concept of consumer banking revolves around relationship banking knowing and supporting the customer in all his/her financial activities with technology that enables the consumer to exercise greater management and control over his/her money".

To achieve the above objective, the plan set out the following goals:

- *" segmenting the market based on need parameters*
- *approaching new market segments*
- *move closer to clients through expansion of branch network and*
- *introduction of technology driven items. "*

Technology Strategies

- *Install Additional ATMs*
- *Introduce EFTPoS*
- *Enhance ATM product delivery*
- *Enhance voice response system*
- *Home Banking*
- *ATM - sharing*
- *Office automation and electronic mail"*

Operational strategies:

- *Focus on quick turnaround and disbursement.*
- *Establish an efficient collection machinery.*
- *Simplify documentation and procedures.*
- *Establish off-site loan disbursal points.*
- *Widen international links.*

Functional strategies:

Basis for achievement of defined goals:

1- increase asset levels in the following manner:

average balances	*92*	*93*	*94*	*95*
	51mm	*62mm*	*68mm*	*75mm*

through a combined strategy made up of:

a. Enhancement of target market population;

b. Revision of existing asset acceptance criteria;

c. Introduction of new products e.g. receivable financing of housing bank, mortgage loans, consumer loans for expatriates, credit cards, loan for house renovation, car loans, etc..

d. ....

e. ....

f. Launch state of the art technology including automated loan approval and other programs to reduce turnaround time for {improvised?} customer service.

2- Increase customer deposits in the following manner:

	92	93	94	95
Current account	18mm	18mm	20mm	23mm
Savings and savers choice account	75mm	81mm	85mm	89mm
Time deposits	42mm	56mm	58mm	61mm

a. Introduce high technology approach to retain and attract customer deposits by launching new products e.g. EFTPoS, Voice Response, Recurring Deposit Schemes.

b. Increase ATMs, and expand branch network to attract net deposits in selected locations.

c. Improve service quality at branches by introducing automated signature verification program and installation of Veriphne machines.

3- Increase fee income as follows:

	92	93	94	95
	0.442	1.125	1.4	1.63 (mm BD)

Defined strategy for achievement of the aforementioned volume:

1- enhance flat fee collection lined to increased loan volume.

2- Improved card volume will generate higher merchant fees.

3- ....

4- ....

Product / target group:

credit cards:

given significant investment into our existing infrastructure. excellent accessibility to captive clientele made up of existing account holders. gaps in the market place. the credit card business   philosophy warrants review. This activity should now be viewed as a potential income generator   rather than a mere ancillary service.

Revised criteria:

- To match competition, redesign existing rules and regulations and develop revised guidelines strictly in conformance with AMEX criteria (the leader in credit card business- the world over)   and market debit card to all depositors of Local Five having a minimum credit balance (to be   selected by division head).

- Annual fees to be waived.

- Customers to be offered both Visa and MasterCard.

Impact: will result in increased usage. Additional usage from merchants

University of Glasgow Business School

Department of Management Studies

An Empirical Investigation of Information Technology Adoption Behaviour in Banks in Bahrain

Volume II

Mohamed Ali Abdulla Ghuloom

Submitted in fulfilment of the Degree of Doctor of Philosophy

September, 1997

Table of Contents

Chapter Eight

Collaboration between the banks

Introduction:

Until 1994 there was no collaboration between the banks based on using IT collectively. There were, however, two initiatives, one, by the central bank, to automate the cheque clearing system which was implemented at that period, and the other an attempt to establish a shared ATM network. The discussion of these two cases highlights, among other things, some of the institutional effects within the banking environment.

The automated clearing system:

The automated cheque clearing system was mainly initiated by the central bank. The objective of this system was to automate the cheque clearing process which took place under the roof of the central bank.

The effect of the clearing system on the banks:

Effect on the processes:

I investigated the effects of the automated clearing system on the processes of three banks, which were Local Bank Two, Foreign Bank Five and Foreign Bank Six. None of these banks changed their processes to benefit the automated outcome of the clearing system carried out by the central bank. The banks continued to post manually from the hard copies that they received after each clearing cycle from the central bank. The informants within these banks argued that the number of cheques that they processed each month did not justify automating the system, as they expected to gain little in

terms of efficiency. As for their IT systems, all banks were instructed by the regulatory body to buy Magnetic Ink Character Recognition (MICR) technology to encode the cheques forwarded to the central bank. This process required additional investment by the banks in IT, which some of these banks perceived as a burden.

Competitive effect:

The automated clearing system had no effect on the banks' competitiveness as all of the clearing of cheques was done by the central bank; none of the banks were earning revenue nor paying for the cleared cheques.

Reason for embarking on the system:

The informant within the regulatory body argued that the main reason for embarking on the automated system was to enhance the efficiency with which the cheques were cleared within the central bank. Despite this rationale, the statistics show that there was a drop in the number of cheques processed from 1985 to 1991, and then an increase between 1991 and 1994,
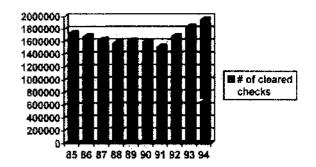
Figure 1: Number of cleared cheques

Source: Statistical Abstract 1994, Central statistics Organisation, Directorate of Statistics, State of Bahrain.

the year in which the automated system started operating. The inference may be drawn that the number of cheques was only one of the factors that rationalised the bank's adoption decision (see Figure 1). The other rationale, which may have been more influential on the bank's adoption decision was their desire to become isomorphic with other central banks within the GCC countries that had automated clearing systems.

Shared ATM network:

Absence of collaboration (1994):

Up to 1994, the banks did not collaborate among themselves to share an ATM network. Some of the banks, i.e. Local 5 and Local 4, invested heavily in creating a large branch network - estimated to be two thirds of the total branches in Bahrain - to capture a bigger share of the retail market. The rest of the commercial banks in Bahrain owned only one third of the total number of branches.

Informants from the banks mentioned that no stand-alone ATM was allowed to be installed, as this type of ATM was classified by the central bank as a branch which the banks would have to pay license fees for. Each bank installed their ATMs mainly in their branches.

The strategic advantage of the banks' ATMs was restricted by the size of the banks' branch networks, since there was no common ATM network amongst these banks. Those with larger branch networks had the biggest strategic advantages while the rest of the banks were limited in their branch network as the ellipses in Figure 2 indicates. The small banks were either restricted in the number of branches they were allowed to open, i.e. the foreign banks, and hence were unable to provide as many ATMs as the two big local banks, or perceived the ATMs as very expensive to invest in, as was the case with some of the local banks.
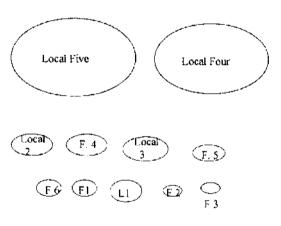
Figure 2: Comparison on strategic potential of the local and foreign banks' individual ATM networks

The strategic implications of the shared ATM network:

Strategic implications to the small banks:

".. that will be beneficial to us because we have only one location in Bahrain, our card holder will go to any ATM and this will enhance our competitiveness.. some banks have a lot of ATMs in Bahrain, so why should they join.. why should they let 'F1' to use the network. This is very small market and the competition is very tight and the population is only about half a million.." IM manager, Foreign Bank One.

".. I think there are a lot of opportunities.. for example, if they agree among themselves to have a national network, any customer from any bank will go to any bank and withdraw money, and it is an advantage to me as a bank.. if I have six branches, then I will have more than forty branches.. my customers will be happy because they can go to any ATM and withdraw money, my customers will be happy this mean that my customers will stay with me.. the other thing is that small banks that don't have the budget to have wide range of ATM network, they can depend on such sort of facilities.. there are a lot of opportunities and a lot of benefits.." IT manager, Local Bank Three.

".. the reason we thought that it would be advantage to us to join the WAN, because we have only two ATMs... Local Four and Local Five have their network all over the place. So why they want to join!" IT manager, Foreign Bank Two.

".. The banks that have larger market share would be reluctant because they will lose their edge. but on the other hand they can get some fees, because if somebody else uses their system they can charge fees. It is a balance between the two. I think there is value in sharing products or services because as I said earlier nothing will be unique about this business six months from where it is.." Deputy manager, Foreign Bank Two.

".. the only thing that I am looking for, is sharing ATMs.. if we had shared ATMs, it would have helped a lot the market, the customers and Bahrain as a financial centre.. I feel very sorry for Bahrain that because we had the idea ahead of all of the GCC. now we find this ATM sharing in Oman, in Kuwait, in UAE and in Saudi. But in Bahrain we don't have it because of two banks they don't want to.. I do agree with them.. if I were Local Four or Local Five, I would not want Foreign Bank Six to use their ATMs. because they have 20 branches each and we have only five. others have only one. It is to my advantage..." Corporate Banking Manager, F6.

".. The shared ATM is something that is going to proof our competitiveness because .. it was a negative for a time for us when we wanted to expand but we were not allowed.. we always wanted to be part of a network because we as a foreign bank are not allowed to open many branches.." IT manager, International Bank Six.

The above are quotations from informants within the small banks expressing their attitude towards the shared ATM network. The small banks perceived that a large branch network is a critical success factor for securing a sound business in the retail market. To them, the most important effect of the shared ATM network is the competitive parity (see Figure 3) that they expected to gain from the network by securing access to the big banks' shared ATM network. This advantage was expected to provide the small banks' clients with the same banking convenience that the big banks' clients enjoyed, and therefore, diminish the competitive superiority that the big banks experienced prior to the shared network.
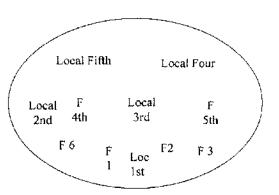
Figure 3: Perceived competitive parity of the shared network - everybody is alike.

Some small banks, on the other hand, i.e. F4 and L2, were cautious about the cost of joining the shared network. F4's general manager said that he would approach the matter very carefully by evaluating the cost of joining the network. As to L2, the bank was concerned about having to keep pace with the banks that are liberal in their spending on IT, which may influence the design of the network.

Strategic implication to the big banks:

The big two banks were racing to create a big branch network equipped with ATMs as a strategic goal for controlling a bigger share of the market. Both banks spent a fortune to achieve this level of spread. Local Five considered the shared ATM network as a strategic threat, as they expected a diminishing value in their large branch network, in which they had invested a lot to establish.

"... until now there is no joint benefits as we are leading and we are not welling to go to any one and say {did not continue his sentence}.. as being the largest bank, we are away ahead .. we are glad to have people with us but the same question applies.. what is the added value for us... if we have a justification we will do it.." IT manager. Local Five.

In contrast to Local Five, Local Four perceived a strategic advantage from the shared ATM network; however, only if it was run by them. The advantage that they were expecting was through earning commission fees from running the shared network. The more banks that joined the network, the higher the commission earned from the switch network. It was unlikely, however, that Local Five would submit to Local Four and join their network. In this instance, the strategic parity to the small banks would decrease since at least one third of the ATMs in Bahrain would remain outside the shared network. As for Local Four, the absence of Local Five would mean that fewer fees could be generated from the proposed network.

Agreement to delay the shared switch:

Prior to the Local Four initiative to introduce a shared switch, which will be discussed below, five of the retail banks, according to the Local Four account, met and decided to postpone any attempt to introduce a switch network that could run the EFTPoS and the ATMs. As one of the reasons behind this decision, Local Four mentioned that none of these banks had a mature IT infrastructure to accommodate the new shared systems, on the one hand, and, on the other, they were unwilling to invest heavily in upgrading their outmoded infrastructure.

Local Four proposal to run the shared ATM network:

The competition between the big two banks was fierce. The initiatives of each bank affected the strategies of the other. Both banks embarked on expanding their branch network and established large branch networks as compared to the rest of the banks. Similarly, both banks adopted contemporary IT systems such as the ATMs, phone banking, and the EFTPoS.

The race between the two banks was resolved in favour of Local Four, when it adopted the Base 24 modular system that runs on the non-stop Tandem mainframe. The Base 24 enabled the bank to run up to one thousand ATMs. At the outset of the adoption process, Local Four did not have the vision to propose a shared ATM network in Bahrain or elsewhere. However, the bank was guided by its vendor who proposed this software to the bank. Base 24 was the only application system that could run on the Tandem machine, according to the IT manager in Local Four. There was not any other system available that could run fewer ATM machines. Local Four had to adopt this system because they had invested in the hardware. By adopting Base 24, Local Four enjoyed an excess capacity in its IT capabilities that gave the bank its future strategic thrust. According to the Local Four account, their competitor, Local Five, did not have the motivation to follow Local Four in buying Base 24, as they would also have to invest in buying Tandem hardware. Such huge investment in the hardware and software was not justifiable to Local Five, since they did not envisage running a switch network in Bahrain, nor did they expect that they would need to run as big a number of ATMs as that run by Base 24.
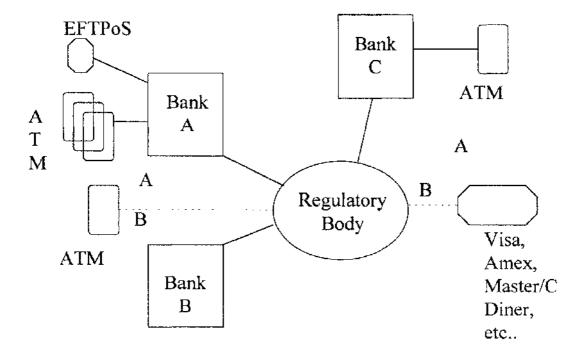
With excess capacity in their IT environment, Local Four's approach to the market became more aggressive. They perceived less competitive advantage driven from the ATMs, as all of the banks had adopted these machines which became a 'generic' product that every bank offered. Local Four perceived a strategic advantage, however, by capitalising on their excess capacity through running a shared ATM and EFTPoS network to the other banks and earning income commission out of the their excess IT capacity that none of the rivals, including their immediate rival, Local Five, could afford to do.

According to the Local Four account, they approached a number of small banks who were willing to join, but before signing the agreement, the whole project was stopped by the regulatory body. Local Five perceived a strategic threat from Local Four's initiative. They expected that local Four would enjoy a permanent supremacy if they owned the network, and because of the small size of the Bahraini market, Local Five would not be

able to nullify Local Four's competitive advantage by initiating another shared ATM network.

The regulatory body initiative:

The regulatory body stepped in as a result of the Local Five's protest against Local Four's initiative. Their rationale was to prevent the monopoly of any bank over the network due to the small size of the country that did not allow multiple networks to run simultaneously. The regulatory body had two proposals; the first was to have an independent company formed by the banks to run the shared network and the second was to run the shared network by themselves. The second proposal was selected since it was closer to the culture of the regulatory body which promoted a tight supervision of the industry.

Possible options.

Figure 4: Proposed Switch by the regulatory body

Figure 4 represents the regulatory body shared network proposal. All banks would be linked to a central switch run by the regulatory body. Any settlement between the banks would be done through this switch. The proposal also included installing stand-alone ATMs. These ATMs would be either the responsibility of some banks, option A, or of the regulatory body, option B. In a later phase, the network would be linked with Visa, AMEX, Master Card, Diners, etc. As it was with the stand-alone ATMs, the link with the Debit/Credit cards would be done either through the affiliated banks or directly with the central switch.

The proposal allows the banks which do not have any ATM machines, such as bank B in Figure 4, to issue cards to its customers to enable them to use the network.

Project fees:

The proposal suggested charging two types of fees. The first type is paid by the issuer bank - who uses somebody else's ATMs - to the regulatory body to cover the cost of the switch. The clients of the issuer bank bear a portion of this fee.

The second type of fee is paid by the issuer bank to the acquirer bank - the bank whose ATMs were used.

The strategic implication of the central bank proposal:

The regulatory body initiative prevented Local Four from dominating the market with its proposed switch.

To the smaller banks, the presence of the two large banks in the network maximised the strategic benefit driven for the shared network as the two banks owned more than two-thirds of the ATMs in Bahrain, and provided a spread to the strategic areas in the country.

As for the big banks, the shared network transported the two banks into a new era in which the strategic advantage was not driven any more by the availability of ATMs, but rather by the fees that these networks generate when the smaller banks' clients use the two big local banks' ATMs.

The selection of Base 24 and Tandem:

The central bank selected the very software and hardware systems (Base 24 and Tandem) that Local Four adopted, and proposed its shared network prior to the central bank initiative. The credit for selecting these systems may be attributed to Local Four's vendor who managed successfully to push its systems to a number of financial institutions in the Gulf.

I infer that the selection of the software by the central bank might be for reasons related to the central bank plans to link the Bahrain switch to other switches in the Gulf. Some of these switches use Base 24 and Tandem hardware. There is another possible explanation, however, for using these systems. Local Four refrained from joining the regulatory body network at the outset of the proposal. It could be that the central bank's initiative to select Base 24 and Tandem was to appease Local Four who would need to do less adaptation of their systems to join the central bank switch.

Local Four regional shared network initiative:

While the dispute between the main stakeholders within the Bahraini banking industry was taking place over the proposed shared ATM network, Local Four pursued its strategies to implement the shared network elsewhere. It collaborated with some other foreign banks as well as its sister banks, in which it had shares, to create a regional shared ATM connecting these banks within the Gulf region. Local Four was more successful in its regional attempt than the local one. The bank and its regional partners agreed to use Base 24 and Tandem as the nucleus for their initiative. The Local Four allied vendor was the supplier of the mentioned systems.

Culture - Local Four initiative, and the lack of initiative of the small banks:

As quoted earlier, the small banks perceived the shared ATM network as a strategic option which would provide them with a competitive parity with the big banks. The question that might be raised is, why did the small banks not collaborate among themselves to establish this shared network?

A possible rationale for the above question can be attributed to the culture of the small banks. Almost all of the small banks were followers in the market and belonged to the second wave of adopters that came approximately five years after the first wave of ATM adoption took place. These small banks perceived IT as a 'demanding mistress' and preferred to 'play it safe' in the market. It was unlikely that very conservative small banks would take the initiative and propose a shared ATM network to accommodate their joint needs. Moreover, some of these banks, because of the lack of top management's willingness to invest in IT, were suffering such deficiencies in their systems that they were falling apart. These banks were unable to cope with the complexity of implementing new systems. The 'know-how' was a problem to many of them. Moreover, reaching a mutual agreement about the details of the shared network was a bottle-neck that they could not pass through. This resulted in the demise of some early proposals:

> ".. we did not approach any one here, I think we did once. An idea came from Local Four, and it was rejected altogether. There were other banks {who rejected the idea}. I think the picture was not clear as to what will happen to my transaction, who will bear that cost, and then who will do the clearing.." IT manager, Foreign Bank Two.

As for the small foreign banks, the control of the banks' IT scene was centralised with the headquarters which were not concerned with the Bahraini market.

Local Four proposed the network because its culture was a 'defiant' one, willing to take the risk and devote the required financial resources. The bank's alliance with its vendor, and with other international banks in the Gulf created an opportunity for the vendor to push its technology and to create a link between these collaborating rivals based on

sharing an ATM network - e.g. Local Four was linked with one international bank and another regional bank in one of the Gulf countries; Base 24 was the nucleus for this link. Moreover, Local Four owned some shares in a switch network in one of the Gulf countries which runs on Base 24. The bank's exposure to the creation of the switch network in that country decreased Local Four's perceived risk associated with such projects an advantage that none of the other local banks were exposed to, including Local Five.

Discussion:

Influence of the central bank on the banks' adoption behaviour:

Both cases demonstrate the influence of the regulatory body on the banks' adoption behaviour. In the first case, the central bank coercively influenced the adoption of the MICR technology within these banks. This type of technology had no link whatever to the commercial banks' business goals nor to their efficiency. Though the automated system had the potential of improving efficiency within the commercial banks, these banks did not re-engineer their processes nor did they adapt their IT application systems to accept the automated processes of the central bank. The bottom line for these banks however, was to comply to the central bank's request and adopt the system regardless of how it was perceived.

The second case study demonstrates the influence of the regulatory body on the way in which the IT systems were deployed in providing services, e.g. not to use the stand alone ATMs beyond the boundary of the banks' branches, and also on the way in which the banking community's competitive structure, driven by using IT collectively, was influenced by the regulatory body. The interference of the regulatory body disabled one of the banks from exploiting its IT capabilities to gain a competitive advantage by monopolising the network. This interference provided a protection buffer to other banks against the active rival's initiatives.

The culture of the regulatory body cultivated accordingly certain IT initiatives that conformed to its culture and at the same time discouraged other initiatives that did not conform to that culture. For example, it was not surprising that the proposed shared ATM network be run by the regulatory body rather than any individual bank or banks collaborating without its intervention. Under this culture, the regulatory body played a major role in the collective IT projects which were more likely to be implemented successfully due to their influential power.

Response to the regulated environment:

Oliver (1991, p. 152)[1] identified five general strategies for responding to institutional environments; these are acquiescing, compromising, avoiding, defying, and manipulating.

The commercial banks had to acquiesce to the tightly regulated banking environment. However, they differed in how they responded or reacted to this type of institution in their environment.

Examples came from Local Four in which the bank attempted to defy the tightly regulated environment through proposing the shared switch network and calling for other banks to join its initiatives, an attempt that did not succeed, as explained earlier. However, in the absence of the regulatory influence in the regional markets, Local Four was able to establish with its regional partners their regional shared network. I infer that by approaching the regional partners, Local Four delivered a message to the banking community in Bahrain that the shared network was becoming a reality it was able to create, regardless of the institutional factors inhibiting or delaying its establishment locally.

The tightly regulated banking industry and the culture of the regulatory body provided Local Five with the ability to avoid the competitive disadvantage it could have gone through had Local Four been able to implement its shared ATM network. As mentioned

---

[1] Cited in Scott, R. (1995, p. 128), 'Institutions and Organisations', Sage

360

earlier, Local Five protested to the regulatory body which interfered on its behalf to stop the Local Four attempt. Despite this intervention, Local Four was able to manipulate the proposal of the regulatory body by enforcing its vendor's systems, which minimised the cost of joining the switch network. Both big banks were also able to manipulate the allocation of charge fees for using the network to provide them with a competitive advantage from their branch network legacy.

The regulatory body, through their regulatory role, managed to 'bang heads' together and brought all parties to an agreement or imposed one on them. As for the foreign banks in Bahrain, the coercive orders of the regulatory body eased the process of getting the green light from their headquarters to spend on joining the shared network. As mentioned earlier, decisions concerning the IT initiatives were to a great extent centralised within these foreign banks' headquarters. The smaller banks in general seemed to play a passive role in the process of sharing the ATM network, though they were nervous about the cost implications of joining the network.

Though a comparison between the Bahraini and the British experience of establishing shared networks is beyond the scope of my thesis, I find it tempting to briefly discuss the effect of the regulated market on the competitive behaviour in each environment. Within the British deregulated banking industry (Howells et al, 1993), the attempts to establish an EFTPoS network went through different phases, from collective efforts to establish the network through an organisation (EFTPoS UK) in which all banks were participating, to the emergence of strategic alliances between the different groups of banks and, hence, collaboration between these allied banks to counter the initiatives of the others. This eventually led to the demise of the early initiative of the EFTPoS UK organisation. In contrast to the above deregulated banking environment, the Bahriani tightly regulated banking industry allowed no alliances nor strategic collaboration between the banks to emerge beyond its direct supervision. Collective initiatives became feasible only under the umbrella of the regulatory body.

Drivers to the initiatives:

There was a high level of inertia among the banks about adopting joint IT initiatives. Indeed, there was an implicit agreement among some of the key banks to reject the shared ATM network, and keep the status quo within the industry. The great uncertainty about what to do, the maturity of the banks' IT infrastructure and the cost consequences of the shared networks might have been behind this inertia.

The driver, however, for the shared ATM network came from one bank, Local Four, rather than being collectively proposed by the other banks especially the smaller ones despite their awareness of the strategic implication of the shared network. This might be attributed, as mentioned above, to the higher inertia level within the smaller banks, on the one hand, and the tightly regulated environment on the other.

The regional banking industries such as the Saudi and the Kuwaiti, for example, which had had their shared ATM networks, created additional pressure on the central bank to encourage the implementation of the shared network. The central bank desired to be isomorphic to the rest of the Gulf banking industries and appear to be as advanced as the others, especially as the central bank was promoting the notion that Bahrain was the financial centre for the region.

Similarly, the stimulus of the automated cheque clearing system, I infer, was more related to gaining a favourable image rather than just gaining efficiency within the central bank. The automated clearing system was perceived as a status symbol by the central bank that it wanted to achieve so as to be in line with the rest of the Gulf States. I infer that this driver had more weight than the rational efficiency account that was provided.

Impact of infrastructure on the banks' competitiveness:

The shared ATM case study demonstrated the influence of the maturity of IT infrastructure on the banks' competitive approaches. To some of these banks, like Local Four for instance, the maturity of the IT infrastructure was the main driver behind proposing the shared ATM network. On the other hand, the less advantaged banks, the majority of which were the small banks, were unable to pursue their strategic interest partly due to their disadvantaged infrastructure, a factor influenced by the banks' culture, as will be discussed elsewhere within the thesis.

Threshold size and strategic influence of IT:

There were references in the informants' narrative replies to the effect of size on their adoption behaviour. I infer from their reply that there was a threshold size beyond which the banks did not have the incentive to adopt some IT systems such as the ATMs. or adopt a wide branch network strategy because of their small customer base. However, beyond a certain threshold point in size, the banks were more able to adopt more aggressive strategies similar to Local Four initiatives.

Conclusion:

The shared ATM case study demonstrates the influence of the institutionalised regulations on how the banks approached the collective IT projects.

Moreover, it demonstrates the inertia within the industry that delayed the initiation of the shared ATMs despite their strategic importance to the banking industry.

The case study indicates that the joint IT project was shaped by the negotiation power of the main stakeholders who are influenced and influence the institutionalised regulatory norms within the industry.

Chapter Nine

<u>IT Strategy</u>

Introduction:

This chapter provides an aggregate account of the themes provided within the single case studies. These themes were driven from the categories that described the IT strategy formulation, business strategy formulation, the relation between IT and business strategies, and the drivers of IT initiatives.

Bryson and Currie (1995) contended that the underlying bases of IT strategy may be placed within two camps. The first of these perceives IT strategy as a formal rational process while the other perceives it as dependent on contingencies and therefore more ad hoc in nature. Bryson et al argue that these views are not entirely mutually exclusive in that there is a middle ground in which the IT strategy may share elements from both paradigms. The following is a brief discussion of each paradigm.

The formal-rational paradigm views organisations as 'systems with coherent purposes and shared goals' and perceives the strategy formulation process as a series of logical steps (Walsham, 1993, p. 143). This approach has its roots in the economic theories which adopt the notion of the 'economic man' who attempts to maximise the outcome of his decision (Currie, 1995, p. 58). Moreover, the paradigm assumes that effective utilisation of IT is critical to the organisation's success. The literature within this school, such as that of Porter and Miller (1985), emphasises the importance of IT in driving competitive advantage. The inefficient utilisation of IT becomes a factor undermining the organisation's competitiveness. The extent of damage caused by the inefficient utilisation of IT depends upon the intensity of competitiveness within the environment (Bryson et al, 1995). The critiques of Earl (1988, 1989) and Scott Morton (1991) are two examples within the literature that belong to the formal rational paradigm.

As discussed in the literature chapter, Earl (1988, 1989) prescribed techniques to aid the generation of strategic vision. However, sceptics of the formal rational approach argue that, although the formal rational approaches, such as that of Earl's, may ".. prove of some use in a particular context, but vision appears to derive largely from tacit knowledge and cannot be reduced to a series of logical inferences and steps.." Walsham (1993, p.161). Further criticism has been aired arguing that this approach fails to consider ".. competing values, objectives and power bases.." (Currie, 1995, p. 61). Moreover, the amount of detail contained in the formal-rational frameworks is a further criticism, as it tends to confuse the decision makers rather than assist them (ibid., p. 61).

The other school studying the strategy formation is the interpretative or the behavioural (Currie, 1995, p. 69). Belonging to this school, Walsham (1993) adopted "broadly interpretative methods". His approach aimed at understanding the context of the information system (IS), and the process by which IS influences and is influenced by this context. This approach incorporates issues such as the social context - historical context and multilevel context - and social processes - process of cultural change and process of political change - among other things, to understand the background from which the 'discourse' about IS strategy takes place. Mintzberg (1994) provides another example of those who cast doubt on the formal rational approach to strategic planning. In an earlier work, Mintzberg and Waters (1989) discussed the emergent nature of the strategy process and described it as the second foot that complements the deliberate process. Quinn (1989, p. 20) criticised the 'text-book' framework approach and advocated a 'logical incrementalism' in which he emphasised the importance of a flexible process:

> "Executives managing strategic change in large organisations should not - and do not - follow highly formalised textbook approaches in long range planning, goal generation, and strategy formulation. Instead, they artfully blend formal analysis, behavioural techniques, and power politics to bring about cohesive, step-by-step movement toward ends which initially are broadly conceived, but which are then constantly refined and reshaped as new information appears. Their integrated methodology can best be described as 'logical incrementalism".

The above author and others have viewed strategy as a process of negotiation which stresses the political nature of organisations (Bryson and Currie, 1995). Johnson (1989) emphasised the role of the organisational paradigm - common beliefs and assumptions

held through the organisation - in interpreting the environmental stimuli and configuring the organisational strategic responses (p. 45). He further argued that:

> ".. strategic decisions could be explained better in terms of political processes than analytical procedures; that cognitive maps of managers are better explanations of their perceptions of the environment and their strategic responses than are analysed position statements and evaluative techniques..." (p. 43).

Currie (1995, p. 74) revealed in her field work, which she conducted between 1990 and 1992 in Japan, the USA, UK and West Germany, that strategy making for advanced manufacturing technology (AMT) was not based upon strict adherence to formal rational strategic planning. Instead, it was more incremental and ad hoc in nature. She argued that the AMT strategy was more influenced by the allocated financial budget rather than a thorough investigation of all relevant information that characterised the rational formal planning. Moreover, the process of strategy formation marked the political struggle over scarce resources amongst the different departments. To quote her:

> "In Anglo/American companies, the annual budget varied only marginally. In times of recession, it was likely that the budget would be cut by, say, ten percent. This would obviously affect management choice about which systems to purchase and would inevitably lead to priority-setting decision-making designed to satisfy rather than maximise out-comes.." (p. 75).

In this chapter, I embarked on using a spectrum similar to Bryson et al (1995) to help demonstrate the extent to which the banks were aligned to the formal rational or ad hoc paradigms to strategy formation. I would like to mention, however, that the Bryson et al spectrum was not sufficiently well described to enable exact representation of the banks. However, as I mentioned above, the spectrum may help in demonstrating the extent to which a given bank's strategies were aligned to the paradigms. I have used the phrase 'aligned' to indicate that the bank's strategies may possess some characteristics of the opposite paradigm and need not purely subscribe to one paradigm. The following is a quotation from Bryson study demonstrating the limitation of their spectrum:

> "We stress that this a conceptual model in the sense of being a heuristic device rather than an exact representation of the precise point in the continuum to which an organisation subscribes.." (p. 679)

Figure 1 represents the Bryson et al spectrum and the criteria they used to determine to which paradigm the strategy may be aligned.

	formal rational			ad hoc
paradigms	Rational formalism	Logical incrementalism		
Strategic value of IT	critical strategic	important	little	not
IT objectives for the future	formally stated unknown		Outlined	unstated
View of the future	clear and predictable uncertain			less certain
Alignment of IT goals and overall organisational strategy	tight	some		none
Business orientation of IT	very high	medium		low
Inputs to IT strategy				
Role of top management	critical	important	little involvement	none
Involvement of mgt. consultants	high	low		none

Figure 1: Bryson et al spectrum.

In addition to the Bryson et al. spectrum, I found Mintzberg and Waters (1989) typology of strategy approaches helpful in describing some of the banks' strategies. Three of these are outlined below as they are related to the analysis of the cases.

Strategy	Major features
Planned	"Strategies originate in formal plans: precise intentions exist, formulated and articulated by central leadership, backed up by formal controls to ensure surprise-free implementation benign, controllable or predictable environment; strategies most deliberate" p. 16
Entrepreneurial	"Strategies originate in central vision: intentions exist as personal, unarticulated vision of single leader, and so adaptable to new opportunities; organisation under personal control of leader and located in protected niche in environment; strategies relatively deliberate but can emerge" p. 16
Imposed	".. strategies can be imposed from outside as well; that is, the environment can directly force the organisation into a pattern in its stream of actions, regardless of the presence of central controls. The clearest case of this occurs when an external individual or group with a great deal of influence over the organisation imposes a strategy on it.." p. 14.
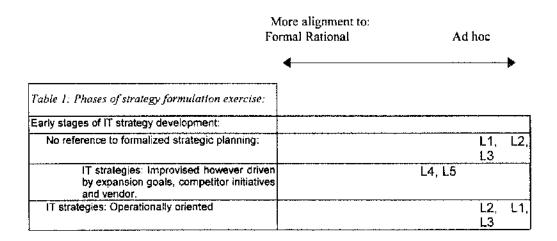
The following sections within this chapter discuss the following themes:

- the formulation of IT strategies and the role of the IT manager in this process;
- the formulation of business strategies;
- the relationship between business strategies and IT strategies; and
- the drivers of IT initiatives.

Formulation of IT strategies within the local banks:

Early stages of IT formulation:

Local banks:

More alignment to:
Formal Rational   Ad hoc

Table 1: Phases of strategy formulation exercise:	
Early stages of IT strategy development:	
No reference to formalized strategic planning:	L1, L2, L3
IT strategies: Improvised however driven by expansion goals, competitor initiatives and vendor.	L4, L5
IT strategies: Operationally oriented	L2, L1, L3

The formulation of IT strategies within the local banks went into different maturity phases (see Table 1). During the early phases, there was no formal strategic planning taking place within the local banks, be it corporate strategies or IT strategies. The initiatives that the banks followed were of an ad hoc nature. According to Bryson et al (1995, p. 679):

> ".. if the organisation does not view IT as strategically important then it follows that they will take an ad hoc approach by default. On the other hand, if IT is seen as strategically important then there is an option between a formal rationalist, a logical incrementalist or a more ad hoc approach for the organisation.".

The IT strategies for the small local banks during this phase were more concerned with the automation of manual processes of the banks' backoffice operations than with the banks' business. For the majority of the local banks, this stage was a chaotic one. Failure was reported by L1- the bank had to scrap its systems at a later date - poorly developed and integrated application systems were reported by L3, and a hardware system was acquired by L4 without any software system to support it. IT was a newcomer to the banks which had little knowledge about how to handle it. It was costly, as most of the banks perceived it, and demanded expertise, the lack of which resulted in the failure the banks reported.

The IT strategy goals for the big banks, L4 and L5, emerged incrementally during the early phases. The strategies were not documented nor did they follow a framework leading them step by step towards their pre-defined goals. They were improvised, however, spurred by the desire of each of the big two banks to secure its leadership status in the local market. There were references to business goals driving these IT initiatives. For example, L4 and L5 both competed in expanding their branch network which demanded deploying IT for this target. Competition was one of the goals that led the big banks, according to L4. Other strategic issues were cost cutting and efficiency achieving, as mentioned by L4. These goals represented the 'umbrella' which defined the overall vision and goals and allowed the banks' strategies to emerge. The big banks differed from the small banks in that their improvised IT strategies had links to their business goals and were perceived as competitive weapons, an issue which the small local banks did not comprehend then.

The top management relationship with the IT departments was strained in the small banks. The top management were unwilling to respond to the appeals of the IT managers due to the perceived high cost of IT systems and the lack of appreciation of their business implications.

The big banks' top management were more supportive to their IT managers, though strains in the relationship did exist, as reported by L4. The IT managers, during this early phase, were the main visionaries and product champions. Moreover, the vendors, as reported mainly by L4, played a major role in driving the improvised ad hoc IT strategies during this phase. As will be discussed in more detail elsewhere in the thesis, the vendors played a
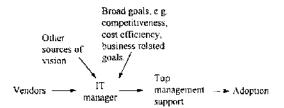
Figure 2: Improvised adoption of IT- based on L4 views

proactive role in directing the adoption of IT strategies. If the vendors had a new technology that would meet the big two banks broad goals- being competitive and cost effective- then they would take the initiative to educate the banks about its implications and hence influence their emergent strategies. During this phase, the IT managers perceived the exhibitions and seminars run by the vendor, or any other parties, as one of the main sources of information which influenced their improvised strategies (see Figure 2).

During this phase, the practice amongst the banks was to develop their systems internally, e.g. L1 and L2 backoffice systems, L3 PC application systems, and L4 application systems, to run on the Tandem mainframe. However, when the IT systems were interrelated with the banks' competitive ability, the big banks, as reported by L4, shifted from internally developing their systems to buying off-the-shelf systems as the cost and risk of failure of the off-the-shelf systems were perceived to be lower than of the internally developed systems, and as there was less need to employ 'armies of experts', as L4 described, to develop the systems that were becoming more and more complex in nature. Moreover, the pace of adoption with the off-the-shelf systems enabled the big two banks, L4 and L5, to counterattack each other's initiatives- based on L4 views.

Foreign banks:

It is not feasible to discern the phases that the foreign banks' IT strategy formation went through, since these banks' strategies were centralised away from Bahrain, as will be discussed later.

Later stage of IT formation:

Table 2 and the following tables describe the later phase of the IT formation process amongst the local banks.

More aligned to:
Formal Rational   Ad hoc

Table 2: Later phase of IT formulation.		
Formal development of IT strategies	L3, L4, L5	
No reference to formal developments of IT strategies		L1, L2
Input to IT strategies (reference made to):		
One man show - links to vendors and Role model banks.		L1
Reference to Committees, with major influence of GM, reference to board members participation for major IT approval.		L2
IT manager - ad hoc system developments		L2
Reference to consultants	L3, L4, L5	
Steering committees- IT strategy centralised with:	L3, L4, L5	
SSC subset of corporate planning committee, aid aligning IT strategy to business strategies.	L3, L4, L5	
participation of representatives of business units in the SSC	L4	
Participation restricted to top management - exclusion of business units heads	L5	
Top management - not precisely defined who they are	L3	
Reference to representatives from board members to evaluate the overall goals of IT strategies and liaison with the board of directors	L3	
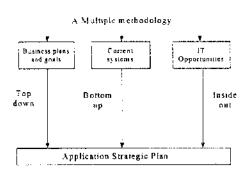
Formulation of IT strategy:

Four of the local banks experienced changes in their culture. These banks were L1, L3, L4, and L5. More about this change is discussed in the banks' culture chapter. With this change, three of the banks, L3, L4, and L5 experienced high isomorphism in their IT formation approach. The other two small banks exhibited some similarity in their IT strategy formation despite the difference in their adoption vitality.

The two big banks, L5 and L4, then followed by one of the small banks, L3, shifted their IT strategy formation to a formal rational approach. The three banks argued that they had had a formal IT strategy. The documents of the strategic plans, stated formally the objectives of the IT. I managed to verify this claim by examining one of these strategic documents in L5. According to Bryson et al., achieving this criterion would align these banks to the formal rational paradigm (see Figure 1). The three banks followed the first type of Mintzberg et al. typology which is the "planned strategy" since the strategies originated in formal plans, formulated by central leadership as will be discussed later, and backed up by formal controls for implementing them. However, the environment was not controllable and benign as was stipulated by Mintzberg et al. Accordingly, Local 4 had to postpone implementing its 'planned strategy' until around two years later than intended mainly because of the unexpected crisis of the Gulf war, and Local 5 had to reduce the time horizon of its second 'planned strategy' to cover only 3 years rather than 5 years to cope with the new market conditions.

In contrast to the three banks, L1 and L2, which were small in size, continued to approach their IT initiatives informally and in an ad hoc manner.

Earl (1989) defined a multiple methodology approach (Figure 3) in which he argued that a three pronged attack approach- top-down, bottom up, and

Figure 3: IS strategy formulation: a multiple methodology.

inside-out- is needed for IS strategy formation.

The three rational banks did not follow Earl's approach literally. However, there were references in the banks' formation approaches, which I inferred from the banks' narrative description, that may give support to some of Earl's methodologies over the others. The IT strategy formation within the three banks was more aligned to top-down, bottom-up approaches than the inside-out, which received no explicit reference from the informants.

The three banks argued that the impetus to their IT strategies was mainly their business goals, which they formulated guided by the consultants. L5, the first of the three banks to implement its formal strategies, referred to this source of impetus as the macro-level where the business was the vision directing the IT strategies. The other two banks support this argument as well. There was another source for IT strategy, which was the users' requests. L5 called this source the micro-level and the bank gave it less importance in directing the IT strategies than the macro-level. The impact of the micro-level on IT strategies may differ from one bank to the other amongst the three. L4 was the most advanced bank amongst the three in serving its users through its PC - LAN environment. This advantage might be attributed to the fact that the bank gave more weight to the micro-level impetus to IT strategy.

Their were references to a bottom up IT strategy formation. The IT managers were the main product champions to this approach. Their main goal was to evaluate the current systems and advise the System Steering Committees (SSC) on their future prospects in serving the banks. Earl (1988, p, 163) wrote that organisations attempt to understand their current IS investment when they begin or renew their attempt to plan IS strategically. There are several reasons for this, among which is the top management's requirement of a clear understanding of the IS status before they can approve any major investments in it. This was the case with L3, for example. Prior to the invitation of the consultants who led an overall strategic planning exercise, the IT manager in collaboration with the vendor, IBM, prepared an analysis of the bank's IT status. This analysis was used to inform the top management and the board of directors of the

deficiency in the bank's systems and the need for an overall revitalisation of the bank's IT scene. Another example is from L5 in which the IT manager, based on the outcome of a bottom up approach, informed the bank of the disability of the bank's systems hitherto in meeting the business goals and recommended renewing their infrastructure.

There are two potential parties who can participate in the bottom up approach, the technologists and the users (Earl, 1989: p. 74). The technologists are mainly responsible for evaluating the technical conditions of the systems, whereas the users are responsible for evaluating the business value of the systems. Within the three 'formal' banks, L3, L4 and L5, there were references to the participation of the users in the evaluation of the new IT systems, as was the case with L4 and L3 for example. However, it was not possible to envisage from the informants' narration whether the users participated in line with the IT managers in the technical bottom up evaluation of the systems.

Input to IT strategy:

The participants in the input to IT strategies varied amongst the banks. However, the IT strategy was considered at the strategic apex level for all of the banks with some exception made for L2.

As for the two small local banks, L1 and L2, their ad hoc IT strategies were more influenced by one product champion. To L1, the operations manager was the main product champion and the visionary for the bank. He was a member of the top management team and his visions, past experience, links to the vendors and role model banks were the impetus of the informal IT strategies adopted by this bank. His role was then to convince his colleagues within the top management team of his ideas. Once approved, his next step would be to convince the board of directors. Based on the Mintzberg et al. typology, the L1 approach may represent the 'entrepreneurial strategy'. To quote Mintzberg et al (1989):

> ".. here one individual in personal control of an organisation is able to impose his or her vision of direction on it.... In this case, the force for pattern or consistency in action is individual vision, the central actor's concept of his or her organisation's place in its world. This is coupled with an

ability to impose that vision on the organisation through his or her personal control of its actions.." (p. 8)

The ad hoc IT strategies of L2 were also influenced by a product champion who was in this case the GM. His views and beliefs had the main influence on the bank's adoption behaviour, e.g. delay in adopting the ATMs due to his negative perception about their effects on the bank's deposit base. In contrast to the crucial role the IT manager played in L1, the IT manager in L2 guided the minor developments such as automating the manual systems within the bank which needed no investments. He was consulted, however, on the major issues though he lacked the power to direct (or influence directing) the IT scene within the bank. It is worth mentioning that L2 enjoyed a relatively monopolistic advantage over the market niche that it served, since, for some time, it was the only bank that had had a license to offer a specialised banking services. This factor, I infer, relieved the bank from considering adopting a strategic discourse similar to the other 'formal' banks, since it enjoyed a relative stable environment.

In both banks, the ad hoc IT initiatives were constrained and influenced by the cost that the top management and the board were strict about. The past experience of the L1 board with their expensive old system which was scrapped and their lack of faith in expensive IT systems affected the operations manager's approach to restructuring their IT infrastructure around the downsized, client server environment. L2 was not as active in its IT adoption behaviour as L1, since cost was a main obstacle that hindered adopting some systems which the IT manager proposed such as that of linking the bank's systems with its insurance company systems. None of the two banks formally approached any consultants to formalise their IT strategies nor did they consider their IT strategies as part of an ongoing formation of a strategy. As mentioned in page 366, Currie's (1995) field work revealed that strategy making was more aligned to incremental and ad hoc approaches. Moreover, she argued in one of her cases that the AMT strategy was influenced by the allocated financial budget rather than thorough investigation of all relevant information that characterised rational formal planning. The findings of the L1 and L2 are parallel to hers.

For the other three banks which adopted the formal approach, L3, L4, and L5, input to the IT strategy was guided / informed by the consultants. Bryson et al. (1995, p. 678) argued that management consultants are more likely to support the formal rational approach for a number of reasons, amongst which are:

- "they wish to offer logical 'solutions' with a clear rationale to client organisations;
- their perceived expertise is promoted and enhanced by being underpinned by rigorous theory;
- their own training and experience as managers reinforced the orthodox view." (P. 678).

The consultants formed system steering committees (SSC) from the banks' top management personnel, in addition to other top personnel from the support functions, e.g. financial controllers and IT managers. The formal rational literature, e.g. Andreu et al. (1992), prescribes the IT/IS committees as the organism in which the IT/IS affairs are handled:

> "IT/IS Committee. This is the organism with final responsibility over the Information System that is eventually designed. It is made up by the company's CEO, the head of the different functional areas, and the Information Systems Manager. This group's specific responsibility include supervising the planning project, expressing the organisation's commitment to the plan development, providing strategic criteria and determining priorities and allocating resources, and finally, approving the IT/IS plan in its final form." (Ibid., p 62).

The consultants' participation was the source of isomorphism amongst the banks (L3, L4, and L5). They institutionalised the norms among these banks as to what was rational and progressive with regard to the banks' strategy formation approach. The consultants, I argue, played a role similar to what Abrahamson named the 'management-fashion-setters'. Abrahamson (1996) defined the management fashion setters as ".. organisations and individuals who dedicate themselves to producing and disseminating management knowledge.." (p. 257). He argued that:

> ".. if norms of progress call for a flow of apparently rational and progressive techniques to sustain the appearance of continuing rational progress, then how do organisational stakeholders come to perceive these techniques as rational and progressive rather than as irrational and retrogressive?
>
> My answer is that there is a management-fashion-setting community populated by management fashion setters. It is this management -fashion-setting community that shapes transitory collective beliefs among management fashion followers that certain management techniques are rational and at the forefront of management progress.." (p. 263)

L3 went further with these committees by involving nominated members of the board of directors in ad hoc committees to work as a liaison with the bank's board of directors who were involved in the process of IT strategy approval. The above arrangement was perceived as a rational approach to IT strategy formation in that commitment of the top management was secured, which appraises the notion that IT is run by the business goals of the banks.

The members of the SSCs were either the same as those who participated in the formulation of corporate planning committees - of which the IT manager was a member also- as in the case of L4, or were a subset committee of the corporate planning committee to which members of the strategic apex belonged and to which the IT manager was invited, as in the case of L5. It is worth mentioning that senior personnel from support units other than the IT unit, e.g. the corporate services manager, as in the case of L5, for example, participated in the SSCs. These committees involved different experts who contributed in one way or another to the process of strategy formation.

Involvement of the board of directors:

In all of the local banks, the board of directors were involved in the process of IT investment approval. For some banks which followed the formal approach, which was directed by the consultant, e.g. L3, the board involvement went further than the traditional approval exercise; for instance, they were involved in making decisions related to the type of bank IT infrastructure.

There were references also to the participation of the IT managers in presenting and defending their IT initiatives at the board meetings. This was reported by L1 which followed the ad hoc approach to their IT strategy formation. The operations manager in this bank was the product champion who directed the IT strategy. Other references were given by L3 and L4 IT managers. The IT managers were invited to define / defend the business implications of the proposed systems to the bank as in the case of the Base 24 which was adopted by L4 (during the informal strategic planning era), or create a tension about the bank's deficient IT systems as was the case with L3 (during the

turnaround phase). In all of these cases the board members, I infer, needed to depend on the expertise of the IT managers to make an informed decision about the proposed IT systems, as in the majority of these cases the banks were undertaking a major change in their IT infrastructure or systems.

In one of the local banks, L4, the board involvement in the process of IT strategy approval was characterised by a political struggle amongst the board members who were also heading other rival banks. Based on the IT manager's account, reaching a decision was not free from the influence of the board members who considered their (other) banks' interests as well. The board meetings witnessed a political struggle, which the IT managers were part of, to convince the opposing board members of the need to adopt certain IT systems within the bank. The IT managers were invited to inform the board about the drivers behind the proposed IT initiatives.

The symbolic nature of the formal rational strategies:

The formal rational approach of the three banks, I claim, played a symbolic role in presenting these banks to the external stakeholders. Cited in Abrahamson (1996):

> "Meyer and Rowan (1977) suggested that managers create the appearance of rationality by using or appearing to use management techniques that generally are believed by organisational stakeholders in a specific context to be rational ways of managing organisations and employees." (261).

> "... Strategy now is a type of representation; it becomes the outward face of the organisation. representing it to external powers (like the stock market and state bodies) with whom the organisation needs to maintain a reputation." Fincham at al. (1995, p. 13)

Elsewhere in the thesis (refer to the financial services and culture chapters for a full discussion) I mentioned that some of the banks experienced profitability problems. Some of these problems were attributed to malpractice within some of these banks. The formal rational approaches / measures that were adopted by these banks played a symbolic role by signalling to the external powers a departure from the previous malpractice and the adoption of healthy practices. These signs were meant to restore confidence to the main stakeholders in these banks. This argument is stronger for L4 and L3, as these banks were under the scrutiny of the central bank and their main

shareholders after they had incurred heavy losses. DiMaggio et al. (1991, p. 69) attributed the mimetic process amongst the organisations, as was the case with L4 and L3 in their approach to formulating their strategies, to the need to gain legitimacy:

> ".. these developments also have a ritual aspect; companies adopt these 'innovations' to enhance their legitimacy, to demonstrate they are at least trying to improve working conditions..." (p. 69)

The banks' adoption of formal approaches to strategy formation is attributed also to the desire of these banks to learn management techniques that enhance their financial position and close the gap that results from economic and technical changes in the environment. Moreover, there were psychological forces - emerging from these banks' frustration with their past performance and their desire to differentiate themselves from their past status - which played a role in spurring the banks to adopt the formal approaches propagated by the consultants. My argument is parallel with Abrahamson's (1996) argument, which contended that economic and technical forces, in addition to sociopsychological forces compete in shaping the demand for management fashions. Organisations adopt these fashions not merely due to sociopsychological forces but also to learn new techniques which would enable them to respond to the organisational gap left open by changes in the economic and technical environments.

Formation of IT strategies within the foreign banks:

The main features that characterise the formation of IT strategies within the foreign banks are discussed in Table 3 and the subsequent tables.

Table 3 : Formation of IT strategies in the foreign banks	
Global IT strategies	F1, F2, F3, F4, F5, F6
Centralized within the head office and regional office level: a top down flow of strategies	F1, F2, F3, F4, F5, F6
Centralized development of IT systems	F1, F2, F3, F4, F5, F6
Compulsory adoption of the 'bread and butter' systems.	F1, F2, F3, F4, F5, F6

The foreign banks share characteristics that distinguish them from the local banks, on one hand, and on the other, create a high isomorphism amongst these foreign banks, as indicated in the above table and as discussed within the coming sections. It is not easy to place the foreign bank branches on Bryson et al.'s spectrum as some of these banks' informants shed little light on the details of how their headquarters formulated their global strategies. I infer that these banks followed a formal-rational planning approach at their headquarters and at regional office level where their strategies get delineated. I argue also that Mintzberg et al.'s "imposed-strategy" approach may best describe these banks' IT strategy formation at the domestic level in Bahrain. According to Mintzberg et al. (1989, p. 14) ".. the clearest case of this occurs when an external individual or group with a great deal of influence over the organisation imposes a strategy on it..". The headquarters and the regional offices represent the external power that imposes these strategies on the branches in Bahrain despite their needs and the competitive pressure exerted within the local market. I would like to add also that there is a political struggle between these branches and their headquarters. This struggle influences, to some degree, the imposed strategies of these banks. The local branches keep struggling with the headquarters and regional offices for extra IT support to meet their local IT needs. The political struggle was a phenomenon which most of the foreign banks branches experienced. To give an example, the following quotation represents F2's struggle with their headquarters:

> ".. for instance the upgrading into the AS 400, when we thought that the system was slow and we had problems, we wrote to our head office and they said that they were already discussing and hopefully we will get it. EVERY TIME WE HAVE PAINS AND PROBLEMS WE START CRYING- I need a system, this system is not giving me what I want, this system is becoming very slow..

> ".. Once I wanted to upgrade my AS 400, and a team came from the headquarters and said why do you want to upgrade, only the other day you invested half a million on buying it. When they walked out they said you don't need it. I did not need to invest at that time. But now after Equation 3. after the calculation they are convinced that definitely there should be a change before we go to Equation 3.."

Global IT strategies:

Unlike the local banks, all of the foreign banks had global IT strategies that encompass all of the group's branches world wide. None of the foreign banks had enough autonomy to develop their IT strategies to meet the specific needs of the Bahraini

380

market in isolation from the grand strategies filtering down from the headquarters. More about the level of branch autonomy will be discussed later on. It is worth noting that one of the foreign banks held its headquarters in Bahrain and all of the IT strategy formation was centralised in Bahrain. This bank, however, behaved as the other foreign banks. It gave none of its foreign branches autonomy to formulate IT strategies.

Top-down flow of IT strategies:

As Figure 4 shows, the IT strategies within the foreign banks were filtered from the headquarters via the regional offices to the branches world wide. These filtered strategies represented the mandates for the branches as to what to do and what to adopt in terms of their IT initiatives.
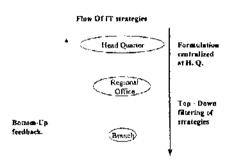
Figure 4: Flow of IT strategies for the foreign banks

Likewise, the developments of the IT systems were made in centralised development centres, and it was compulsory for the groups' branches then to adopt the 'bread and butter' systems developed within these centres.

Centralisation of developments and economies of scale:

The foreign banks perceived the centralised development of their systems as a rationalised means for achieving economies of scale and controlling the cost of systems developments, as inferred from their informants' arguments. Such arguments illustrate the institutionalised rational processes that the foreign banks conformed to.

Shaping the strategies - a bottom-up approach:

Global IT strategies might be influenced by the group branches' feedback, the effect of which, however, is minor

Figure 5: IT strategy formation in F1

compared to the top down approach discussed above. Shaping the global strategies, as illustrated by Figure 5, starts with the branches' feedback on their unique needs that the global strategies had failed to address. These requests and concerns are filtered up to the regional offices, which in turn evaluate them and decide whether there is a regional or global need to pursue them. This approach is less structured than the top down approach mentioned earlier. For example, F2 depended on their IT manager to struggle for IT solutions from the headquarters through complaining via the memos sent to the headquarters. These memos form the pressure which shapes the bank's global strategies.

'Trickle-down' effect of global IT strategies:

The effect of the foreign banks' IT strategies directed at the Bahraini market could best be described as having a 'trickle-down' effect. This phenomenon is common across the foreign banks. These banks' IT strategies were more geared towards meeting the IT requirements of the major international markets which were regarded as having higher business potential than the local Bahraini market. Once these IT needs were satisfied, the developed systems were then trickled down to the smaller markets which were placed at the bottom of the rank, such as the Bahraini market. As Table 4 indicates, the foreign banks, as a result of the trickle down effect, became less responsive to the local IT needs and consequently were less reactive to the local rivals' IT initiatives.

	Foreign Banks					
	1	2	3	4	5	6
Table 4: Trickle down effect	*	*	*	*	*	*
Reference to IT strategies geared to markets with high potential then universalize these systems	*	*	*		*	*
Less responsive due commitment to global IT strategies	*	*		*		*
Less responsive to small markets, e.g. Bahrain	*					*
Competitive advantage nullified- (competitive disadvantage) by local rivals' systems due to slow responsiveness	*	*		*		*
Standardize systems, not tailored to the local requirements, unable to match local's systems				*		*

Local IT 'strategies' of the foreign banks' branches in Bahrain:

All of the foreign banks' branches in Bahrain were restricted in their autonomy to pursue their local IT needs. However, some of these foreign banks' branches enjoyed limited autonomy, e.g. F1, F2 and F4, in meeting their local needs as long as their IT projects did not require significant investments and change in the group's main systems. Some application systems, for example, were developed on the PC environment to meet the unique personal finance needs of the Bahraini market that the global system did not offer as was the case in F4. In most cases, these localised initiatives required the approval of the regional office responsible for these branches. In the extreme case, the foreign banks' branches did not have any autonomy at all for developing local IT

systems. F6 was the example of this case. This bank did not have any programmers to develop or to alter any application system.

	Foreign Banks					
Table 5: Local IT strategies of the foreign banks:	1	2	3	4	5	6
Reference to Local IT affairs raised in a top management committee		*	*	*		*
Local IT affairs looked after mainly by the operations department					*	
Head of business units were not active in defining their IT needs					*	
Reference to lack of IT strategy					*	
Reporting lines between the local IT departments and the regional or H. Q. offices to air concerns about their local IT problems / needs	*	*	*	*	*	*

There were references in four of the six foreign banks to local top management committees to which the IT managers were invited and in which the local IT affairs were raised. Representatives from the business units were usually present in these committees. The IT manager's role was to communicate the banks' local needs to the regional offices for support. In one of the foreign banks, F5, the local IT affairs were mainly the responsibility of the operations manager. In this bank, the business unit head(s) acted passively with regard to defining the unit's IT requirements. This bank was the only bank amongst the foreign banks that argued that they did not have any IT strategies as the bank was in a standstill position for a long period of time.

Participation of different expert groups in the development of the application systems - the F3 experience:

The F3 experience was unique among the banks. Due to the nature of its banking operations (Islamic banking) that differed from the other conventional banks, it had to develop all of its applications depending on its internal resources. The development process required the participation of the different expert groups in this process, for example, a key participant in the bank's Islamic Banking System (IBS) was the financial controller, who contributed to the development of the IBS with other bankers and technologists. The bank considered its IBS as a strategic system which enabled support for the 'Islamic' banking operations in an integrated and on-line manner. Fincham

(1995) and Scarbrough (1997) have acknowledged the importance of the different forms of expertise in influencing IT strategic initiatives. Fincham (1995), for example, argued that ".. in the technology arena the intentions of top management are heavily mediated by their dependence on the expertise of other groups..." (p. 7). The following quotation demonstrates the influence of the technologists' input on the top management strategic decisions:

> "... with our expansion plan..... we as technologists looked at that plan and saw how much we are going to invest on IT in this expansion plan. We thought that this investment was huge... since the market was changing, the hardware and the software and based on our analysis and study of the market, we thought that this is the right time to review our overall hardware and software strategy..."

> ".. the Wang went into chapter 11 and it was our responsibility to inform the management and give them different various solutions... similarly while changing the strategy, we have to go to them and update them of what is the future perspective of future computing, the open system platform, the networking and so on. And based on our input to them, because they are not technical people, they relay on our input for that decision making so in order to make sure that we get the best decision from them we have to update them very thoroughly of what is happening in the market.. because we don't want a decision that is taken and then regretted later on..." IT manager of F3.

Role of the IT managers in shaping the local banks IT strategies:

Table 5 summarises the main features characterising the IT managers' role in the process of shaping their IT strategies. The main role that the IT managers played within the formal rational banks, L3, L4 and L5, was a reactive role rather than a proactive role, as L5 described it, in serving the banks' business strategies. The IT managers argued that their role was an advisory one to the top management sitting in the System Steering Committees (SSC) as to how they may support the banks' business goals. They were, however, powerless in influencing the banks' business goals and setting priorities as to what to adopt. The power was mainly maintained with the top management who sat on the SSC as they controlled the amount of investments poured into the IT projects and what systems would be implemented.

Table 5: Role of the IT manager in shaping the local banks IT strategies	L1	L2	L3	L4	L5
Understand, advise, and enable however not lead the business strategies	*		*	*	*
Sole product champion of IT strategy	*				
Product champion of the infrastructure change	*		*	*	*
Early phases: Driver of IT strategies. Depended on vendors, exhibitions and seminars.			*	*	?
Past experience and relationship with vendors influenced IT managers' vision / competence	*	*	*	*	?

As for the small banks, L1 and L2, in which the IT strategies were informal and of an ad hoc nature, the role of the IT managers varied. In L1, the operation manager was the main product champion of the bank's informal IT strategies. The multiple role that he played as the head of different functional units enabled him to pursue his role as a product champion of the IT strategies. All the information he needed about the bank's IT requirements were comprehended by him, as he claimed. In contrast to L1, the L2 IT manager's role was less active than the rest of the banks at the strategic apex, due to the bank's sluggishness. However, when it came to proposing a new system, the IT manager played a similar advisory role to the top management as in the rest of the banks.

A distinction has to be made, however, from the early phases in which all of the banks followed ad hoc and incremental IT strategies. In this phase, the vision of what to do came mainly from the IT managers who were the main product champions directing the IT scenes within the banks. However, at the later phases of IT strategy formation, the process shifted to the system steering committees, as in the cases of L3, L4 and L5.

IT managers, visionaries of their banks' IT infrastructure:

The role of the IT managers was greater when it came to designing the IT infrastructure the banks needed. In four of the five banks, the IT managers argued that they were the product champions for their IT infrastructure design. They were perceived as the most expert with regard to evaluating their current systems and deciding on their infrastructure. This role was consistent with the role of the Foreign 3 IT manager who played a crucial role in leading his bank's infrastructure design. Fincham et al (1995)

has argued that strategic and operational issues are closely interrelated and the development of IT is part of a process of strategic interchange. They further argued that "the 'technical' input from computer-skilled staff reflected their own awareness of long-term trends in the viability of systems" (and) ".. computer professionals are able to shape strategy by controlling the options other groups perceive as feasible" (ibid., p. 24). The IT managers, by virtue of their technical expertise, had foresight with regard to long term IT infrastructural (and in some cases systems') needs and possible threats. They therefore contributed considerably in this area which the top management perceived as the IT managers' responsibility. How IT managers play a crucial role in educating and influencing the top management's strategic decisions is illustrated by the quotation on page 385 concerning the F3 IT manager's role..

Liaison with the vendors:

The IT managers, by virtue of their technical expertise, were at the front line in their contacts with the vendors and hence were the vehicle through which the vendors influenced the banks' IT initiatives though for some of the banks, e.g. L4, the vendors targeted the top management as well to influence their vision. This relationship was important as the majority of the local banks depended mostly on off-the-shelf packages in serving their IT needs. The past experience and relationship of the IT managers with the vendors were a source of influence over the banks' IT initiatives and competence. For example:

- L1's relationship with the vendor in Ireland influenced the bank's system that ran mainly on a sole vendor software;

- the ex-relationship of the later IT manager with IBM influenced the L4 decision to adopt the AS 400; and

- the previous employment of L2's IT manager with the bank's vendor enhanced the IT manager's experience in developing Islamic banking application systems.

Role of the IT managers of the foreign banks in shaping their IT strategies:

The role of the IT managers of foreign banks in shaping their IT strategies is summarised in Table 6

Table 6: Role of the IT manager to the Foreign banks:	Foreign Banks					
	1	2	3	4	5	6
Implementing IT systems from the head office	*	*	*	*	*	*
Participant in IT strategy development			*			
Liaison with the headquarters:	*	*	*	*	*	*
Visit the bank on a part-time basis	*					
Participate periodically at headquarters level to get informed about global strategies and feedback H. Q.	*	*		*	?	*
Participant in system / top management steering committees		*	*	*		*
Advisory, supportive, consultative however not directive role		*	*	*		*
IT manager contribution came after business needs were defined		*	*	*		
Product champion of infrastructure initiatives	*	*	*	*	*	*
Informer / sensor of potential threat from IT environment:		*				
Educate top management as to technological changes in the market		*				
Main source of vision to the top management as to main opportunities and threats in the IT environment		*				
Hybrid background - internal consultant to the functional areas (so claimed)				*		

Implementing IT systems:

The main role that the IT managers played within the foreign banks was a technical role concerned with implementing the IT systems filtered to their branches from the head or regional offices. Their role in determining the IT strategies within these banks was minimal and restricted to providing the regional offices with feedback about their local IT needs. One exception, however, was F3 where the IT manager participated in a top management committee to set the group's IT strategic vision. This difference in the role of the IT manager in F3 from the rest of the foreign banks could be attributed to the location of the headquarters of this bank in Bahrain. from which the bank's global IT strategy was drawn.

Liaison with the head and regional offices:

To enable implementation of the banks' global IT strategies, all of the IT managers communicated with the regional or the head offices. Some of the IT managers reported that they had two reporting lines, one with the bank's GM and the other with their groups' regional or head offices.

Product champions of infrastructure changes:

The IT managers emphasised their role as the main visionaries of initiatives of a technical nature, an issue that formed the source of a cultural gap with the top management, due to the lack of awareness of top management of the implications of these systems, on one hand, and, on the other, the lack of power of the technologists to impose these systems (more about this topic will be discussed within the culture chapter). Initiatives such as the 'Disaster Recovery Systems' came from the IT managers rather than the business side. Such projects, due to their technical nature and intangible return, formed a source of tension between the management and the technologists. For example, Foreign 6 delayed the adoption of the disaster recovery system because of a dispute between the top management, who lacked the required technical sophistication and the technologists about how to acquire and implement the proposed system.

The IT managers also played the role of product champions in terms of the infrastructural transformation within the banks in Bahrain. They lobbied, as reported by F2, at the headquarters office for new infrastructures to meet their local needs.

Educator / informer of any IT related threats within the environment:

As mentioned earlier, the IT managers played an educator and informer role to the top management, who were not able to take any informed decisions without the IT manager's contribution. The top management was alerted of the possible threat and

deficiencies of their systems and, possibly, their relationship with their vendors by their IT managers.

Advisory role but not directive:
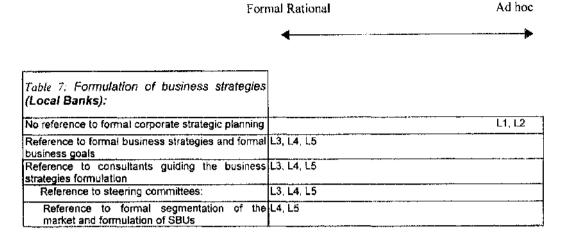
As for the foreign banks' business goals, the IT managers perceived their role as advisory to the banks' local business goals rather than directive. Some of these banks mentioned that their participation in the banks' top management committees was not permanent but by invitation whenever there was an issue related to their specialities.

Formulation of Business strategies within the banks:

Strategy formation in the local banks:

There is a high degree of isomorphism among the local banks in their approach to formulating their corporate / business strategies.

On one hand, L1 and L2 strategies were more of an ad hoc nature (see Table 7). Their business strategies, as L2 declared, were not innovative as they were committed to producing the same products almost since their inception. These banks had top management committees that were responsible for directing the banks. These committees, as L2 described, were mainly involved in adjusting their 'interest rates' and credit limits to the market's parameters. These were the examples that the head of the bank provided when he talked about how his bank formulated their business strategies.

Formal Rational   Ad hoc

◄────────────────────────────────►

Table 7: Formulation of business strategies (Local Banks):	
No reference to formal corporate strategic planning	L1, L2
Reference to formal business strategies and formal business goals	L3, L4, L5
Reference to consultants guiding the business strategies formulation	L3, L4, L5
Reference to steering committees:	L3, L4, L5
Reference to formal segmentation of the market and formulation of SBUs	L4, L5

On the other hand, isomorphism was high between the big local banks, L4 and L5, and one of the small banks, L3, in their approach to formulating their business / corporate strategies. The three banks depended on consultants to set the formal process. Moreover, the three banks depended on high level committees to set strategic goals. The big banks opted to structure their businesses in strategic business units. The small bank, L3, perceived itself as not big enough to introduce specialised business units as was the case with L4 and L5.

Strategy formation in the Foreign banks:

Table 8: Formation of Business Strategies	F1	F2	F3	F4	F5	F6
Business strategies directed / influenced by H. Q. or Regional office	*	*	*	*	*	*
Reference to no formal locally developed long term plans:				*	*	
Reference to short term nature of Business strategies in Bahrain				*	*	
Formal corporate strategic planning			*			
Budgeting	*	*	*	*	*	*
Budgeting as strategic planning					*	

Table 8 summarises the main features of the foreign banks' corporate strategies. The foreign banks also exhibited a high degree of isomorphism among themselves in the way that they approached their business strategy formation based on the informants' accounts. A common feature amongst these banks is the high influence of the groups' strategies on their branches' local strategies. With some of the banks, e.g. F1, their local strategic goals followed their global goals which focused, among other things, on

serving their international corporate clients. The other foreign banks branches' overall goals and guidelines came from their regional offices. However, some of these branches had some autonomy to manoeuvre under the 'umbrella' of these global guidelines.

Foreign 3 followed a formal strategic planning approach. This bank differed from the rest of the foreign banks in the location of its headquarters which was in Bahrain, and thus its formal strategic plans were developed in Bahrain and were extended to other markets.

The other foreign banks' branches in Bahrain followed formal capital budgeting procedures to fulfil the requirements of their headquarters. Some, like Foreign 5, for example, referred to capital budgeting as a strategic planning process. This capital budgeting was on a short term basis.

The local strategies for the foreign banks, which had some autonomy to manoeuvre under the 'umbrella' of the headquarters' global guidelines, were of a short term nature, a year or less, as the F4 general manager declared. There was no formal documentation of the short term strategies in that bank.

Some of the foreign banks claimed that they had defined business areas within which to exploit potential opportunities. Despite this claim, there was a consensus that all of the banks were more or less similar in broadly targeting the same market segments and offering similar products. This might be manifested in the following quotation of Foreign 4 GM where he described the banks as the

"... 'lemming' .. that jumps over cliffs and kills itself.. one goes in one direction, normally we will rush after them .. one gets competitive advantage.. next year everybody else is caught up with you..".

Relationship between IT and business strategies:

This section explores the relationship between the IT and business strategies based on the informants' narration.

The relationship within the local banks:

The relationship between IT and business strategies for the local banks is summarised in Table 9. Based on the case studies, I identified two main types of interaction between IT and strategies as indicated in Figure 6. The official account that all of the informants wanted to produce was that the relationship arrow flew from the business strategies to the IT strategies. This account argued that the IT initiatives were guided mainly by the banks' business needs. The banks differed in the degree of normalisation to this alignment, as will be discussed below. The second category of relationship gave a greater role to the current IT
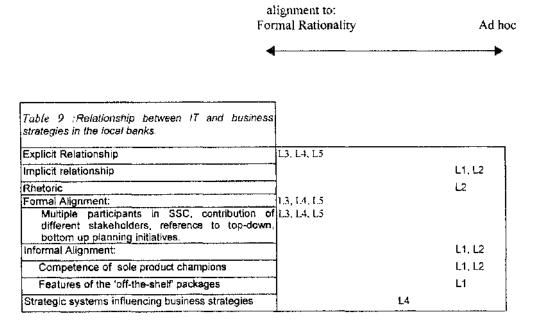
Figure 6: IT - business interaction.

strategies in influencing the banks future business strategies. Interestingly, four of the banks denied this relationship. However, in one of the banks, L4, this relationship was present, as will be discussed later.

alignment to:
Formal Rationality   Ad hoc

Table 9 : Relationship between IT and business strategies in the local banks.		
Explicit Relationship	L3, L4, L5	
Implicit relationship		L1, L2
Rhetoric		L2
Formal Alignment:	L3, L4, L5	
Multiple participants in SSC, contribution of different stakeholders, reference to top-down, bottom up planning initiatives.	L3, L4, L5	
Informal Alignment:		L1, L2
Competence of sole product champions		L1, L2
Features of the 'off-the-shelf' packages		L1
Strategic systems influencing business strategies	L4	

Explicit relationship between IT and the business (see Figure 7);

Within the formal rational banks, L3, L4 and L5, the relationship between business strategies and IT was explicitly spelt out as was presented in L5 strategic planning documents (refer to L5 case study). These banks argued that the mutual vision between the technologists and the business representatives were achieved formally. The centralised planning committees, represented by the SSC, and the participation of the different stakeholders from within the bank and outside it as well, e.g. the consultants, were the formal means through which these rational banks claimed that they achieved this alignment.

Figure 7 : Relationship between business and IT strategies.

The strategic relationship between IT and business strategies was not present, however, in all of the SBUs' strategic plans. In terms of the retail business, the strategic relationship was both intimate and explicit. However, in the other businesses such as the commercial and corporate businesses, as in the case of L4 and L5, the strategic relationship between IT initiatives and business strategies was absent.

Implicit relationship between the IT and business:

To the ad hoc banks, L1 and L2, the relationship between IT and business strategies was implicit rather than explicit. There were no formal IT strategies and there was no formal alignment between them and the business strategies in general.

To L1, the alignment between the business and IT was claimed to be achieved informally through selecting an appropriate 'off-the-shelf' package(s) capable of meeting the 'bread-and-butter' traditional banking services. There was no formal planning taking place, and the whole process depended on the features provided by the vendor's application systems. The alignment, which is done informally, is dependent on the competence of the sole product champion directing the IT scene and his

comprehension of the business needs. This bank provided no more than the 'bread and butter' services which were less likely to change over time and hence needed no more than the 'bread and butter' IT systems to meet the IT needs of the retail services.

In contrast to L1, the role of the off-the-shelf package in serving the bank's business goals was marginal in L2 mainly due to the nature of the business operations (Islamic banking finance) that few if any of the off-the-shelf application software was able to fulfil.

The nature of the banking industry dictated that some of the IT initiatives needed to be aligned to the business goals of the ad hoc banks. The strongest example was the expansion of the branch networks that required IT infrastructural support, which all of the banks had to provide due to the nature of the banking sector.

'Rhetoric' relationship between IT and business:

Some of the replies that the informants provided about how they perceived the relationship between their IT and business strategies could best be classified as 'rhetoric'. A good example is provided by L2, whose strategies were ad hoc in nature. The head of the bank claimed that their IT strategies and business strategies were to a large extent overlapping and highly integrated. This description did not conform to the nature of the IT initiatives the bank took, on the one hand, and on the other, their IT manager's claim that their focus was on automating manual processes, some of which did not have any link to the business goals. I assume that such a 'rhetoric' relationship was claimed mainly due to the desire of the head of that bank to conform to what he perceived as an institutionalised tight rational relationship between IT and strategy. By failing to conform to this institutionalised rational perception, the informant feared drawing a negative image to his bank. Such an argument may illustrate the symbolic role of IT that the players in the banking industry by one means or another wanted to conform to.

The effect of infrastructure on the relationship between IT and business strategies:

The maturity of the IT infrastructure affected the relationship between the business strategies and IT strategies. The older the infrastructure was, the less capable it was of coping with the new trends brought by the competitors, and the less able it was to support more aggressive business initiatives. For example, L2 disregarded the attempt to link its IT systems with its insurance subsidiary systems due to the outmoded features of their IT structure. L3 was disabled from meeting its branch expansion goals without revamping its IT infrastructure.

To enhance the relationship between the two strategies, the rational banks embarked on migration projects. The migration projects aimed at transforming the banks from the old infrastructure to newer ones. The product champions of the migration projects were the IT managers. During the 'bottle neck' migration process, the IT strategies were mainly infrastructural-led.

One of the ad hoc banks, L1, reported that it migrated to a new infrastructure due to the deficiency of its old infrastructure in meeting its transaction processing requirements. The operations manager was the main product champion of the migration initiative, which was based solely on his visions and past experience. The other ad hoc bank L2, also suffered from infrastructure deficiency; however, due to its conservative approach to IT, it decided to disregard pursuing some of its business goals.

IT systems influencing business strategies:

The impact of IT on future business strategies, which represented the other face of the relationship between IT and business strategies (refer to Figure 6), may best be demonstrated by L4's adoption of Tandem and Base 24 application systems. The bank at the outset of the adoption initiative did not envisage providing shared ATM services to the banking community. However, the excess capacity that the IT department built from investing heavily in these systems affected the bank's future business initiatives. The bank was more able to share its IT strength and earn revenue not subject to

fluctuation in interest rate as a result of this excess IT strength. Moreover, Base 24 and Tandem were more able to provide retail banking products such as credit cards and EFTPoS at a marginal incremental cost, since the core module package was already adopted by the bank and the bank needed accordingly to invest less in buying the additional modules serving those additional products. In contrast to Local 4, their competitors would have to invest in both hardware and software if they wanted to adopt the strategic Base 24 module system, an option which was very expensive to the rivals.

The adoption of this strategic IT system in L4, which had widened the scope of their business, was achieved during the informal strategy formation phase rather than the formal rational phase. The relationship between the vendor and the IT manager, and the impact of adopting a 'leading-edge' IT strategy were crucial in strategically influencing the business strategies.

The relationship between IT and business strategies within the foreign banks:

More explicit relationship between IT and strategy at the head office level:

The relationship between the IT and corporate strategies of the foreign banks were more delineated at the headquarters and regional offices level than the local level. The strongest example of the above argument was Foreign 1 corporate and IT strategies. F 1 group's strategy for its foreign branch network, including that operating in Bahrain, aimed at providing banking services to their international clients wherever they operated. The bank therefore assigned a higher strategic importance to the electronic banking and 'Cash Management System' it developed than the retail systems (although the bank provided both). All of these relationships were delineated by the bank's central planning offices, rather than being determined locally.

Some of the foreign banks, such as Foreign 2, for example, argued that though they were under close supervision from their headquarters, they also maintained some autonomy over the local business they ran in Bahrain and in the close regional markets. The local

steering committees that these banks had formulated played a major role in aligning local IT requirements with local business requirements. The 'client-server' and LAN systems introduced in Foreign 2, for example, aimed mainly at serving the business requirements of the branch in Bahrain - to provide prompt services to the regional clients.

The nature of local strategic planning performed by some of the foreign banks was short term, as Foreign 4 and Foreign 5 described. I infer that such a short term vision of strategic planning would be unable to direct the long term vision of IT strategies. Some of these banks, i.e. Foreign 5, referred to budgeting as strategic planning, an exercise which all of the foreign banks were doing for the regional offices. Currie (1995: p.61) argued that some organisations may be highly involved in budgeting however fail to produce strategic thinking:

> "Indeed, in some organisations, strategic planning is inextricably linked to budgeting, where managers simply play the 'numbers game' without engaging in any real strategic thinking (Mintzberg, 1993)......
>
> The numbers game may actually impede strategic thinking since performance measurement and control tends to be geared to existing organisation structures and not future ones..".

The nature of planning that some of the foreign banks were involved in may indicate that achieving a formal integration between their IT and business plans was beyond the scope of their local plans, as in the case of Foreign 5, for example. This bank was highly involved in the 'numbers game' to fulfil their head office requirements, nonetheless, it failed to identify its strategic IT requirements. In general, Foreign 5 did not have an IT strategy, as claimed by the operations manager, since it was the 'neglected child' of its group.

Excess IT capacity and new scope of business:

All of the foreign banks argued that business was leading the IT rather than the other way around. There was, however, one case in which the bank decision to invest in its IT scene created a new scope of business for the bank in later years. This was the case with the Foreign 3 Islamic banking systems that they developed
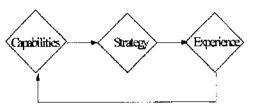
Figure 8: Effect of accumulating experience on strategy

depending entirely on their internal resources. With this system they developed expertise in Islamic banking IT applications. The bank then formed an IT services company and hence entered into a new line of business, fulfilling the systems' needs of the Islamic banks. This new scope of business had not been envisaged at the outset of the bank's decision to depend on its internal resources to develop its application systems. However, the committed resources and support of top management, on the one hand, and on the other, the participation of the different stakeholders, bankers and technologists alike, in the process of developing the bank's systems created the excess IT capacity and expertise which had a market niche to sell to. The Foreign 3 experience resembled the Local 4 experience that I discussed earlier. Both cases elucidate that "experience with ("performing") a strategy is expected to have feedback effects on the set of organisational capabilities" which in turn affect the banks' ability to exploit further strategic opportunities (see Figure 8 [Burgelman et al, 1997, p. 275]). The above argument is consistent with the Itami et al. (1992) argument in which it was contended that the relationship between strategy and technology is dynamic rather than static; the current strategy may foster and cultivate future technology and the cultivated technology (and expertise) in turn may drive cognition of future strategy (refer to the literature review for further discussion of Itami's argument).

Effect of infrastructure on adopting competitive business strategies:

The foreign banks reported that they have had infrastructure problems that restricted their ability to adopt IT systems which were linked to their corporate and business strategies. For example, Foreign 3's old infrastructure failed to support the bank's expansion strategies, while the Foreign 4 infrastructure failed to support their retail phone banking system. A more dramatic change amongst the foreign banks happened in Foreign 3, which it had gone into a grass roots evaluation of its IT infrastructure and redesigned it to meet its future business plans. During the infrastructure bottleneck, these banks focused on the infrastructure issues of their systems, and as Foreign 4 argued, there was a time lag before their infrastructural-led IT initiatives became capable of meeting their business IT requirements.

Drivers of IT initiatives (see Table 10):

Table 10 :Reason for embarking on IT initiatives:	L1	L2	L3	L4	L5	F1	F2	F3	F4	F5	F6
Competition - leadership in the market				*	*						
Match the competitors	*	*	*	*	*	*	*	*	*		*
Everybody more or less was doing the same	*				*		*	*		*	*
Match the norms - Vogue		*									
No efficiency / competitive advantage but we would offer it	*	*				*				*	
Essential for the banks' image	*		*				*	*		*	
Follow the head / regional offices.					*	*	*	*	*	*	
Supporting business goals / strategies	*		*	*	*	*	*	*	*		*
Infrastructural problems	*		*	*	*			*	*	*	
Operations needs	*	*						*			

Accounting for IT adoption may be attributed to rational forces such as competitive pressure within the market, need to gain efficiency, and / or operational requirements. However, there are complementary institutional forces that explain the adoption behaviour of the banks. The banks seemed to strive to conform to the norms within the

environment. These norms might be institutionalised by the powerful and successful banks, or set by other key players within the industry, such as the consultants who prescribed how strategies, including the IT's, ought to be formulated. Alliances with the vendors was a phenomenon which, I would argue, was behind the banks', especially the local banks', acquisition of knowledge which influenced their IT behaviour. These vendors played a role in diffusing IT initiatives within these banks. The relationship with the vendors was one of the institutionalised rationales for buffering the uncertainty and perceived risk associated with the adoption behaviour. These banks' IT initiatives were more influenced by the adoption pace within the banking community as a whole - or by the lemming behaviour as it was labelled by the GM of F4 - rather than the pace of development within the IT technology.

The following are some of the main driving forces that the informants mentioned as influencing their adoption behaviour.

Competition:

Competition was one of the main driving forces that the banks provided as a rationale for their adoption behaviour.

The two rational banks, Local 4 and Local 5, attributed their IT initiatives to the competitive pressure of maintaining their leadership in the market. On the other hand, the majority of the banks argued that their IT initiatives were defensive measures to match the competitors.

The lemming effect:

There was a high perception amongst the banks that they were all more or less doing the same with regard to their deployment of IT within the industry. How they differed, however, was in the maturity level of their IT systems, to paraphrase one informant. The drive for the banks in this case was to conform to the prevailing norms within the industry.

The GM of Foreign 4 described the banking community as the 'lemming' community in which the isomorphism between them was very high due to their mimetic behaviour. The banks were inclined to conform to what had been institutionalised within the banking industry as normative services or systems, regardless of whether these services or systems contributed to that particular banks' efficiency or profitability (in some of the case studies). Credit cards and telephone banking were two examples of services that were institutionalised within the banking industry and were perceived as taken for granted retail services. Some of the banks argued that they had to follow the norms, or the vogue, as Local 2 described it, and provided these services despite the lack of profitability or efficiency of these services to the banks[1].

Information technology played a role in enhancing the banks' image, as some of the banks described. This role was another incentive, I infer, in driving the banks towards adopting IT systems similar to the most successful banks' systems and hence increasing the homogenisation amongst the industry. Such an attitude may provide the banks' management the support needed from the key stakeholders within the industry or buffer the blame for being incompetent had there been any major problems facing the banks. An example of this argument could be derived from Local 3 initiatives to adopt the same techniques and approaches towards adopting IT systems as that adopted by the two big banks, which were perceived as successful ones. As mentioned within the case studies, Local 3 experienced severe profitability problems which were followed by a shake-out in the top management and board of directors' positions, followed then by new reforms in the bank. isomorphic to Local 4 and Local 5 initiatives. The message that the top management wanted to communicate to the stakeholders in the industry was that by adopting new means for their goals they were efficient in their approach and progressive, and were no longer the 'village bank' as they had been perceived previously. There were psychological forces at work within the bank due to frustration from their past performance[2], striving for status differentiation to distance them from the

---

[1] As spelt out in the case studies, Local 1 expressed its intention to adopt Visa credit cards mainly because it had become an institutionalised service within the industry despite the lack of profit it gained from this service. Likewise, Local 2 argued that the adoption of IT became just like the vogue that everybody had to adopt despite its real value to them. He gave phone banking as an example.

[2] The same argument may be made for L4, which went through similar profitability problems.

former status as a 'village bank', and striving for novelty to put them in line with those strong and financially sound banks.

> "The more the managers of lower reputation organisations adopt fashionable techniques to make their organisation look like higher reputation organisations, however, the more both higher and lower reputation organisations look alike" (Abrahamson, 1996, p. 272).

It is worth noting that psychological drivers and economic drivers were intertwined in creating the demand to adopt the mentioned course of action.

Regional and headquarters orders:

The foreign banks' IT driver was more related to their head and regional offices' mandates than to the branches' strategies in Bahrain. According to Foreign 6, for example, their IT systems were imposed on them and they had little say about them, to the extent that some of these systems, e.g. MIS, were considered as a bane to the management rather than a support.

Supporting the banks' business goals:

There was almost a consensus between the banks that their business was a driver to their IT. Despite this argument, some banks such as Foreign 5 and Local 2, maintained a languid relationship between their IT initiatives and business initiatives.

Infrastructural drivers:

The majority of the banks suffered from IT infrastructure problems which were drivers for migration initiatives, the most dramatic of which was the Foreign 3 case. Some banks like Local 2, for example, did have infrastructural problems; however, the conservative attitude of the bank's management restricted any infrastructural migration within this bank.

Progressing with the vendors' systems:

The majority of the banks maintained a long-term relationship with their vendors and consequently progressed with their vendors' platforms, as demonstrated by the case studies. This phenomenon was perceived by Local 1 as a driver influencing the banks' decision to upgrade their IT infrastructure. This bank reported that they upgraded their ATM systems entirely because of their vendor's influence. As the technology became older and new series of these platforms became available, the vendors played a more active role in motivating these banks to upgrade their systems. The motivation could take the form of providing more attractive prices for the new technology, as was the case with the coloured ATMs that replaced the old ones in Local 1. In this instance the upgrade, according to the account of Local 1's informant, was not related to any business or efficiency needs.

Operational needs:

There were operational drivers amongst the banks' accounts for their IT initiatives. The Islamic banks, Local 2 and Foreign 3, emphasised meeting their operational needs as a major driver of their IT initiatives due to the lack of 'off-the-shelf' application packages in meeting their backoffice operations, which were different from the traditional banking operations. These banks depended on their internal resources in meeting their operational needs. Amongst the conventional banks, the most dramatic example in which the operational needs were the main drivers of its IT initiative at certain phases was the Local 1 example. As discussed in that case study, the bank had to scrap its old systems due to their inaccuracy in processing the bank's operations.

Central bank(s') requirements:

The central bank requirements imposed certain IT systems on the banks. Some of these systems were standard systems that each bank had to adopt. An example was the encoder systems used within the banks to encode the checks heading to the central bank.

Meeting the central banks' reporting requirement was among the drivers which some of the foreign banks mentioned. The foreign banks were requested to provide periodical reports to the central banks in their home countries, as well as to the central bank in Bahrain. IT was highly evaluated for enabling these banks to meet these reporting requirements. The same argument applied for the local banks as well. All of these banks had to acquire minimal systems to enable them to meet their reporting requirements.

As for the collective initiatives, the central bank regulations set the rules of the game within the market. For more detailed discussion about this issue, refer to the chapter on collaboration between the banks.

Chapter Ten

The banks' relationships and networks

and their effects on adoption behaviour

Introduction:

Networking with other institutions plays a role in affecting IT adoption behaviour as my case studies exhibit within this part of the thesis.

The role of networks in shaping economic activities may is described in Granovetter's articles (1985, 1992). Others, like Shearman and Burrell (1987)[1] studied the evolution of networks amongst organisations and their clients, suppliers, and rivals. They emphasised how the behaviour, the perception and the attitude of the management involved in social networks were shaped and influenced by these networks which evolved with the sectoral life cycle. Swan (1996) stressed the importance of understanding the role of social networks in constructing, shaping and diffusing the required knowledge for innovation. Scarbrough (1997) emphasised the importance of social relations and expertise in empowering the adoption of new concepts. Clark and Staunton (1989: p. 158)[2] emphasised the importance of sharing knowledge through the networks of connected firms. In line with the previous arguments, Fincham (1994: pp. 104-6) stressed the importance of the networks in sharing ideas and transforming knowledge. He referred to cases in which organisations exploited networks with the suppliers from which they gained professional expertise. In other cases, he referred to organisations that exploited a variety of networks with other participants in the field to cope with the knowledge requirements of strategic developments.

---

[1] cited in Fincham et al. (1994: 104)

[2] cited in Fincham et al (1994)

In my case studies, I identified a number of relationships that had had an influence on the banks' adoption behaviour. These relationships were with the suppliers, the consultants, and other role model banks and stakeholder banks.

In the following section I will discuss the main themes raised by the vendors, as these themes will clarify the role of the vendor-bank networks in shaping the banks IT strategies. Following that, I will discuss the role of networking with other banks and consultants.

Relationship with the vendors:

Main themes raised by the vendors:

I interviewed four main vendors: IBM agents, AT&T, Tandem Agents (ITS) - a regional vendor - and Manteq (Mnt.) - a local vendor.

A summary of some of the main themes raised in the interviews with these vendors follows.

Downsizing the banking systems:

Manteq promoted the concept of downsizing the IT systems amongst its clients. This vendor claimed that the banking environment was mainly built around mainframe systems which were old in their infrastructural concepts and expensive to maintain. He referred to this phenomenon as the 'Jurassic Park' phenomenon.

Manteq's promotion strategy was built on comparing its downsized systems' cost and flexibility with IBM mainframe systems. According to his analysis, the downsized systems were more cost efficient than the mainframe systems and suited the banks' environment in Bahrain, due to their relatively small size.

The informant defined the following factors as the main drivers for downsizing:

- efficiency in terms of cost and performance;

- need to upgrade the old mainframe systems to cope with the new business realities which required flexibility, responsiveness and cost efficiency; and

- trends within the international IT environment which would reach the local market;

The informant also discussed the main factors that he perceived as inhibiting or slowing down the downsizing trends in Bahrain. These factors are summarised below:

- lack of banks' awareness about the revolutionary changes within the IT environment;

- lack of leadership within the banks willing to risk change;

- previous relationship with the vendors;

- board member - vendor networks; and

- high cost of migration from the mainframe to the downsized environment.

Shift in the vendors' marketing strategies:

There has been a shift within the international vendors' marketing approach to focus on industries rather than a line of products and systems. This trend has been reported by IBM which dedicated 'selected international accounts' to serve their international banks. AT&T behaved similarly; it formed a 'Customer-Focused-Team' consisting of a number of experts directed to each of its major clients in the different industries.
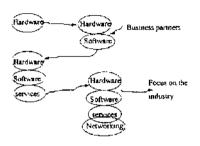
Figure 1: IBM trend towards providing total solutions

Total solution providers - links with other IT providers:

Another trend amongst the IT vendors was their claim that they provided total solutions to their clients. Interestingly, these vendors acted alike in terms of their approach to the market. All of the four vendors claimed that they had business partners - software and hardware firms - who enabled them to provide total solution services. Figure 1 describes the stages IBM went through from hardware providers, to hardware and software providers, and to total solution providers through strategically aligning with other vendors within the industry.

Perceived role of the vendor - (vendor perspective)

Table 1 lists the main issues relating to how the vendors perceived their role towards their clients. IBM reported that they discussed with their key international clients their future developments, and the clients on their behalf discussed their future IT needs with IBM. Through this mutual understanding, IBM became capable of meeting the international banks' IT needs, the informer of IBM claimed.

Table 1: Perceived role of the vendor (vendor perspective):	Mnt	IBM	AT&T	ITS
Mutual discussion of future plans between vendor and foreign bank at H.Q. level		*		
Claimed that they influenced the infrastructure and business models:		*		
e.g. opening (linking) midrange systems and mainframes to 'PC-client server' technology. Adhered to market pressure.		*		
Claimed that awareness among bankers needed attention	*	*		*
Educate the user, increase his literacy, through seminars, expertise and exhibitions. Create demand for the technology	*	*	*	*
Understand requirements and provide enabling technologies		*	*	*
Work as 'strategic partners'. Understand what services the banks are looking to provide, to enable providing of the best technology.		*	*	*

IBM also claimed that they have had a profound influence on their client banks' IT infrastructure and business models. I infer that the other vendors had a similar effect on their clients' IT infrastructure as well.

Three of the vendors argued that awareness among the banks with regard to the developments and business implications of the IT systems required more attention from the vendors. All of the vendors claimed that they played an informer / educator role to their clients through their direct contacts or through arranging seminars, expert visits, site visits outside Bahrain, exhibitions, etc. The aim of these arrangements was to expose the banks to the vendors' IT systems and thereafter influence their IT adoption decisions.

Figure 2 illustrates one of the bank-vendor relationships. ITS influenced Local 4 IT strategies through educating this client about the Base 24 system and its implications for the bank's business. The vendor referred to his approach as 'coaching' the bank's key personnel, through different means such as arranging for exhibitions and
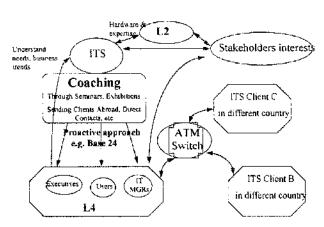
Figure 2: ITS vendor relationship with its clients

seminars, sending the executive personnel abroad to gain insight into the business implications of the proposed IT systems for the bank's business, and directly contacting and educating the bank's management.

Figure 3 illustrates IBM's approach to educating their clients, which resembles that narrated by ITS, AT&T and Manteq (Manteq educated Local 1 about a downsizing approach which became the bank's infrastructure policy). Networking with these vendors played an informative / cognitive role in informing the clients of main developments in the field, and
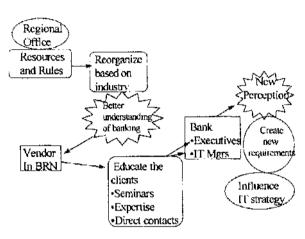
Figure 3: IBM relationship with bank clients in Bahrain

trends within the vendors' systems. It also signalled the competitors' IT adoption intention, based on the L4 account. This finding is in line with the findings of Child and Smith (1987)[3] who reported in one of their case studies how networking with the suppliers was used as a means of sensing strategic actions by the rivals.

There was a reference from IBM, AT&T and ITS vendors that it was important to perceive their relationship with their clients as a strategic partnership to enable them to meet the banks' requirements. These vendors argued that their role was to understand their clients' business needs and then provide them with the enabling technologies. Some vendors, e.g. ITS, claimed that they played a proactive role with their clients in which they took the initiatives and proposed systems to them which had future business implications.

---

[3] cited in Fincham et al. (1994: 105)

Vendors' network with the local banks:

This section discusses the vendors' role from the perspective of the banks (see Table 2). The bank-vendor relationship was long-standing. All of the banks progressed with their vendors' IT platform series, with the exception of Local 2, that was still with the first platform it bought since it automated its systems.

Table 2: Vendor- local bank relationship:	1	2	3	4	5
Long relationship with the vendor	*	*	*	*	*
Bank progressed with the vendors' systems	*		*	*	*
Reference to vendor guiding IT strategies at certain stages				*	
Vendor as an informer to the bank	*		*	*	*
Bank discusses business needs			*	*	*
Vendor provider of solutions:	*		*	*	*
technical Advice	*	*	*	*	*
information about new IT developments	*		*	*	*
information about the competition				*	*
Source of interrelatedness with others in the region				*	
Stakeholders' interests in bank and vendor		*	*	*	
Aided other regional banks with similar banking requirements in developing their systems		*			
Source of recruits to the bank		*			
Vendor-IT manager collaboration to evaluate IT infrastructure, early attempts for formal IT strategies. Bottom up approach.			*		
Strategic relationship. Future strategies enabled by/ depend on vendor's systems	*		*	*	*
Strategic relationship with software vendor due to relationship with hardware vendor			*	*	*
Desiring informative role as to business implication of IT from vendor but not able to get		*			
Strategic relationship with software vendor independent from hardware	*				
Hardware vendor totally independent from software vendor: Hardware vendor directed infrastructure design	*				
Hardware vendor directed infrastructure	*		*	*	*

To three of the local banks, L3, L4, and L5, the alliance with the hardware vendors had a strategic importance in the long run since their information systems applications ('off-the-shelf' applications) depended on the hardware systems these vendors provided.

To Local 1, the bank's relationship with the software vendor was strategic since their IT strategies depended on what this vendor's 'off-the-shelf' systems provided both in the short and long run. Their IT strategies were not dependent on any hardware vendors since they adopted an open system strategy which enabled them to run their software systems on any other platforms. Despite that, the bank's relationship with their hardware vendor was of a long term nature rather than a temporary, transactional nature. The bank's operations manager attributed this to the trust and mutual understanding that had developed between the two since the bank started its automation in 1987.

As to Local 2, there was a listlessness in the relationship with their vendors mainly due the bank's current languorous attitude to IT developments.

The bank-vendor relationships gained importance due to the informative role that the vendors played to their client banks. To enable them to pursue this role, three of the local banks discussed their business objectives with their vendors.

The bank-vendor relationship for one of the banks, Local 4, was a source of liaison with other networks of banks in the region for creating a shared ATM network. Some of these banks and the vendor had a stakeholder interest amongst them.

There were references in the cases to direct participation of the vendor in the formulation of IT strategies at certain stages of the banks' IT development phases. For example, IBM was a source of the 'grass-roots' evaluation approach of the Local 3 IT strategy that started with the IBM initiative to help the IT manager within that bank to diagnose their IT systems. Another example was the ITS initiative to provide Local 2

with expertise for developing the bank's internal system. The IT manager of Local 2 was an ex-ITS systems analyst.

As to the source of these networks, I observed that there was a common stakeholder interest that stimulated these banks to network with their partner vendors. For example, Local 3 and its vendors have a shareholder interest in both entities. Similarly, as Figure 2 illustrates, Local 2, Local 4 and their vendor have common stakeholder interests, as the investors in these entities were from the same regional country. In other cases, the source of the relationship between the bank and the vendor was the IT strategy product - champion's past experience and previous relationship with the vendor. For example, Local 1's relationship with Kindle was because of the past relationship between the bank's operations manager and Kindle. In Local 4, the adoption of IBM AS 400 was influenced by the bank's IT manager, who was an ex-IBMer.

Vendors - Foreign banks relationship:

The relationship between the foreign banks and the vendors (Table 3) was defined at the headquarters level. Figure 4 illustrates a typical relationship between IBM and its international clients. As narrated by an IBM informant, the relationship was defined at the headquarters level. The branches of these banks in Bahrain as well as the IBM vendor in Bahrain, have to follow the agreements made at the headquarters. The informants from the foreign banks in Bahrain were less informed about this
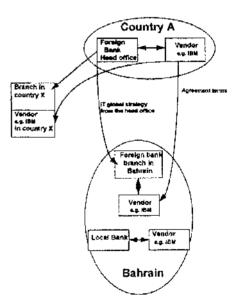
Figure 4 : Relationship between IBM and its clients

414

remote relationship and therefore it was hard to investigate in greater depth the nature of this relationship. Nonetheless, Table 3 explores some of the characteristics of that relationship.

Table 3: Foreign banks - vendors relationship:	F1	F2	F3	F4	F5	F6
The relationship is maintained at the head quarter level	*	*	*	*	*	*
Reference to long relationship with the vendors	*	*		*		*
Bank in a turnaround position - assess his relationship with his vendor					*	
Relationship with vendor as threat to the bank's IT strategy			*			
IBMers	*	*		*		*
IT strategy was hardware dependent (run on just the allied vendor's hardware)	*	*		*		*
Reference to source of collaboration in acquisition / mutual developments	*	*		*	?	*
Relationship with vendor perceived as a threat			*			
IT strategy was hardware independent			*			

The rationale that the branches of the foreign banks provided for this relationship with the vendors was to enable their banks to implement their global strategies through standardising the hardware environments. There were references by three of the foreign banks, Foreign 1, Foreign 2, and Foreign 4 to mutual system developments and support with their vendors. As was the case with the local banks, the foreign banks' networks with their vendors were long-standing, with the exception of Foreign 3 and Foreign 5.

Foreign 5 was in the turnaround position and was assessing its relationship with its vendor which was NCR. There were no references as to why this relationship was assessed. Nonetheless, the bank was embarking on a global renovation of its IT hardware. It was not clear as to whether Foreign 5 was following the majority of the foreign banks who had had migrated from the NCR systems to IBM.

The most interesting case among the Foreign banks was Foreign 3's relationship with its vendor. Unlike all other cases, this bank perceived its relationship with WANG as a threat to its strategic IT plans. Foreign 3 anticipated that WANG was having financial problems and would not be reliable in the future. Moreover, due to the bank's total

415

reliance on its internal resources and the inability of the vendors to provide any 'off-the-shelf' applications (due to the bank's unique banking operations), the bank did not perceive any benefit (or expertise) that could be derived by committing itself to any IT vendor and it opted therefore for an open system.

In contrast to Foreign 3, Foreign 2, which was a regional bank, perceived its network with IBM as a substitute to the 'huge' IT expertise and resources that the foreign international banks have within their groups. The following points summarise the importance of the IBM-Foreign 2 relationship:

- Source of signal of global changes in the IT environment;

- Provider of expertise to the bank, consultancy services and training programs;

- A role model to the bank. IBM flattened its structure and Foreign 2 followed the model of its vendor in terms of organisational structure;

- Decrease the risk of project failure;

- Enabler of infrastructure developments;

- Source of systems;

- Source of collaboration with other banks using the same systems to increase the reliability of systems against any breakdown (members of these banks agreed to allow other banks using the same systems to use their hardware in case of any failure in their systems).

Relationships with consultants and other role model banks:

Table 4: Other forms of relationships	Small Banks			Big Banks	
	L1	L2	L3	L4	L5
Relationship with consultants:			*	*	*
Consultants from abroad				*	*
Consultants from Bahrain - Stakeholder interests			*		
Relationship with a foreign bank outside Bahrain: Seconded a team - at early stages of the bank's inception			*		
Banks with similar work experience outside Bahrain - informal networking with vendors' clients	*	*			

Relationship with consultants:

The relationship with consultants was an important source of expertise which affected the approach to formulating their IT strategies within three of the local banks. Both Local 5 and Local 4 approached the consultants more or less at the same time, though Local 5 preceded Local 4 in formalising and implementing their business and IT strategics. Local 4 fell behind due to the Gulf crisis. Both banks approached international consultants rather than local ones. Both of these banks behaved almost similarly and both preceded Local 3.

There was a stakeholder interest in the relationship between Local 3 and the local consultant. This stakeholder interest is also found in the bank's relationship with its vendor.

Local 3 linked with an international bank and seconded a team from that bank to support Local 3 during the early years of inception. The IT scene for the bank in those early days was created by the seconded team. Local 3 was not the first bank to second a team from an international bank. Local 4 preceded Local 3 and collaborated with an

international bank, according to a consultant report. However, there was no reference to any influence from the international bank on the Local 4 IT scene during those days.

Relationship with role model banks:

There were references to informal networks with other role model banks who influenced Local 1's and Local 2's IT adoption. These role model banks acted as a source of vision in developing L1's informal approach to the IT scene. As to Local 2, the bank approached another Islamic bank to gain insight as to how it would develop its systems. Both of these local banks and their role model banks did have links with the vendors. Moreover, I noticed that there were a stakeholder interest amongst the local banks and the role model banks.

Discussion:

The narrative description of the informants defined a number of relationships that had an effect on the IT adoption process. These relationships were a source of tacit knowledge and expertise that influenced the banks' strategic vision and adoption behaviour.

The relationship with the vendors influenced positively the adoption of IT within the banking industry in Bahrain. There is grounded support to the previous argument from the local banks and one of the foreign banks. As mentioned earlier, these networks were a source of knowledge to the banks, which navigated through the complex IT environment depending on the knowledge passed from the vendors to them. The knowledge that the banks acquired was related to the business implications of the systems as well as the technical solutions. For the more capable vendors such as IBM. the relationship took the following forms. It was a source of providing support to their clients' IT strategy formulation exercise, e.g. Local 3 with IBM. It was a source of

consultancy, e.g. Foreign 2 with IBM. It became an outsourcing option, e.g. Foreign 4 with IBM.

To the foreign banks, the relationship with the vendors was perceived as an enabler for implementing the banks' global IT systems and that was through standardising the infrastructure. It was not feasible to inquire deeper into this relationship due to its centralisation at the headquarters level away from Bahrain. However, two of the vendors (IBM and AT&T) shed some light on it and claimed that both the vendors and the banks achieved a mutual vision through discussing their future strategies and developments with each other, e.g. Foreign 1 and IBM.

Among the 11 cases there was only one case, Foreign 3, that broke the rules and perceived its relationship with its vendor as a threat. In this case, the bank did not anticipate any form of expertise that could be passed from any particular vendors to the bank due to the different nature of its operations. The bank was a newcomer and so was different from the majority of the banks which were not willing to ape its approach.

The phenomenon of vendor-bank networking may be a by-product of the institutionalised banking environment. With the exception of Foreign 3, all of the banks were networked with certain IT vendors. The isomorphism in the banks' behaviour could be seen also in their approach to networking with IBM. As Figure 5 illustrates, almost all of the banks
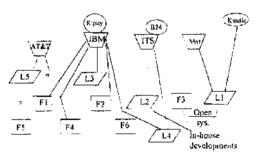

Figure 5: Vendor-Bank networks.

were networked to a vendor, with the majority of the foreign banks becoming IBM clients.

I infer that the banks perceived their networking with the vendors as a means to buffer the high risk of failure associated with the adoption of IT systems. Moreover, it was perceived as a means of providing the banks with newer and more complex systems.

Such institutionalised perceptions about the role of the vendors acted to create an isomorphism amongst the banks.

Another feature that characterised the local bank-vendor relationships was the presence of stakeholder interests in both the banks and the vendors which, I deduce, was a source of this relationship in some cases. This argument is made with reference to Local 3 and its vendor. The presence of board members interlocking between the bank and the vendor gave persistence to this long term relation. Other examples of this kind of relationship were between Local 4 and its vendor, and Local 2 and its vendor. As the cases indicated, these vendors had led / enabled their clients' adoption initiatives.

Some of the relationships between the local banks and the vendors emerged as a result of the past experience and networks of the IT managers. An example of this type of relationship is L3 with his vendor.

Among those banks that talked about their relationship with their vendors, trust was a salient feature that promoted this long term relationship. A good example was Local 1's relationship with its vendor. Unlike the majority of the cases, the bank's IT application systems were hardware independent. Nonetheless, the bank maintained its long relationship with its hardware vendor due to the trust that had developed between the two over the years.

The bank-vendor relationship facilitated a biased adoption of IT amongst these banks. The majority of the banks depended on a main vendor and restricted themselves to progressing within the hardware and software provided by these vendors. The strong relationship with the vendors and the biased adoption of their systems were a source of inertia to these banks. In their conceptions, Powell and DiMaggio (1991) pointed out that:

> ".. organisations are not only involved in a set of exchange relations with other social actors; they are also located in a network or framework of relations which their own activities create but which also acts to shape and constrain their possibilities for action." (Scott, 1991, p. 171).

Depending upon the networks or relationships as a means to acquire knowledge and expertise from the vendors acted as a double-edged sword, with one edge facilitating the adoption of certain IT systems and the other constraining the banks' options to adopt other forms of infrastructure and systems, e.g. downsized open systems as opposed to mainframe systems, which might be more cost efficient to them. In line with my argument, Hannan and Freeman (1989) identified the restriction imposed on the organisations to adopt only one specialised channel of information as one of the causes of structural inertia:

> "Acquiring information about relevant environments is costly, especially in turbulent situations where the information is most essential. In addition, personnel tend to specialise in using certain information channels even when other, perhaps newer, channels would provide superior information. This is another kind of sunk cost, an accumulation of specific human capital... Such specialisation limits the range of information about the environment that an organisation can obtain and process, thus reducing the possibilities of adaptive change.." (p. 69)

The stakeholder interests which characterised some of these relationships, the trust which was built over the long years of transacting, and the sense of security gained from the knowledge and expertise supplied by the vendor may sustain these networks and discourage adopting systems which need no permanent networks with any vendor.

The relationship with the consultants was a phenomenon that was present in three of the local banks, Local 3, 4, and 5. These consultants enabled the banks to formulate formally their business and IT strategies. I induce that the role of the consultants to Local 4 and Local 3 was more than guiding the banks in formalising their strategies. I argue that the relationship with the consultants was a means by which the two banks gained legitimacy before the stakeholders and that is through appearing to adopt a rational and a progressive means to approaching their business and IT scenes. Both banks experienced a revolutionary change in their board and top management members due to previous problems that affected the banks' profitability. By formally approaching the consultants, these banks wanted to signal a diverting point in their practice before the main stakeholders. By doing so, they aimed at rationalising their behaviour and gaining legitimacy from the regulatory body and the shareholders in Bahrain.

The informal relationship with 'role-model' banks guided two of the small banks in their adoption behaviour. This cost-less approach substituted the more expensive approach of networking with the consultants that the other three local banks followed. Through this relationship the banks gained expertise about how to approach their IT scene. Moreover it illustrated the mechanism through which these banks resembled each other.

Chapter Eleven

The Banks' Culture

Introduction:

The discussion in this chapter is based on the material presented within the "Banks' Culture" and "Problems Associated With the Adoption of IT" categories of the case studies. There were other categories that I have collapsed, such as the 'Role of IT', and used in combination with the culture category. This chapter discusses cultural effects on the adoption of IT and the most important concerns aired by the informants.

The chapter starts by discussing the influence of the historical orientation of the banks on their adoption behaviour. Westall (1996, p. 24) argued that the link between culture and business history is very intimate as each contributes to the other. Based on this intimate relationship, I argue that the banks' historical orientation has had an influence on the banks' adoption behaviour.

The next section uses metaphors to classify the banks' cultures. The informants' narration was rich with a vocabulary that revealed attitudes, beliefs, and opinions, some of which were embodied within metaphors. I begin by using the metaphors that the informants provided to classify the banks' cultures and thereafter link them to the adoption of IT behaviour within these cultures.

The chapter also discusses the changes that occurred within the banks' cultures, and the context in which the discourse about IT took place. Moreover, this chapter discusses the cultural gap that existed within these banks, the role of the IT managers in this cultural gap, the attempts to bridge this gap, inertia within these cultures and IT concerns and problems.

The banks' historical orientation and IT adoption:

In this part of the thesis I argue that the banks' historical orientation influenced their IT adoption attitudes. Westall (1996, p. 24-25) argued that:

> "the culture of a business is a product of its history, because it is shaped by the interactions between individuals and circumstances in the firm's past.... Yet, at the same time, the course of business history is itself a product of business culture. This is because, once established, a culture forms a key element in the matrix that determines the speed and direction of corporate development. Business culture is therefore a legacy from the past that helps to shape the future.".

The banks' strategies, some of which had been followed since the banks' inception, played a major role in shaping their cultures. There are arguments in the literature that suggest that culture and strategy are indeed the same. For example, Bate (1994, p. 19) wrote that:

> ".. I am not suggesting that culture is like strategy (and vice versa), nor am I saying that culture and strategy are closely related (as are Weick and others when they talk about the one being an 'outgrowth', 'offshoot' or 'dimension' of the other). What I am saying is that the one is the other: culture is a strategic phenomenon; strategy is a cultural phenomenon."

As for my case studies, the long pursuit of some strategic focus had created a culture within these banks that affected thereafter the banks' adoption decisions. My example comes from Local 2. Since its inception, the bank focused on serving 'limited income employees'. This type of strategic orientation created a culture within the bank that avoided going beyond providing what the bank perceived as the basic services that 'limited income employees' needed. Terms such as "convenience banking services" were not among the vocabulary that the bank used to justify their adoption behaviour. Therefore, when the idea of introducing ATMs in the bank was first raised, the main decision makers looked at the ATMs as a source of threat to their deposit accounts rather than a potential advantage - a perception that was consistent with their culture that ascribed a 'garish' role to some IT systems and avoided providing them, due to their perception of the needs of their historical client base.

Local 3 provides another example of the influence of the bank's cultural history on its IT adoption. The bank was mainly created by merchant businessmen, who dominated its board of directors. The historical domination of the merchants on the board of

directors created a salient corporate identity that influenced the way the bank reacted to events or carried out business. I infer that the bank's cautious approach to investing in IT prior to the bank's revolutionary changes was mainly due to the cautious behaviour of the businessmen who tended, as one informant said, to 'pull the plugs off' and spend less whenever they feared - as merchants - a slow down in their business activities. The old board members maintained a culture that was more sensitive to how much this technology would cost, rather than how much it would transform their business. However, with the change in the board of directors, the newcomers brought with them a culture that was more sensitive to IT issues than the old board's culture. The new members participated positively in the bank's IT strategies and were active members on the ad hoc committees that they formed to look after their IT scene. The new attitudes that the merchant board members brought with them were not, I believe, remote from their role as businessmen who had a stake in some of the IT vendors the bank was dealing with.

A third example is derived from the historical circumstances which influenced the creation of Local 4. This bank was created as a counterweight to Local 5, according to a consultant. Since then, rivalry between the two banks has become a part of their culture - just like the historical rivalry between Oxford and Cambridge Universities - which has driven their business as well as their IT initiatives. The branch network expansion, the adoption of ATMs, phone banking, EFTPoS, and credit cards were some IT related examples that took place in both banks almost simultaneously, as a reflex to each other's initiatives.

I would like to continue my discussion by providing a summary of some of the key events of a number of the local banks that formed the historical context in which the discourse about IT strategies and initiatives took place. The importance of key historical events for the adoption of IT strategies and initiatives may best be summarised by Walsham (1993), who argued that:

> "The discourse on IS strategy at any point in time takes place from a background provided by the *historical context*. This includes the history of the previous computer-based information systems in the focal organisation, the history of the focal organisation itself, and the broader contexts

within which the organisation is located. Human beings enact past events and actions in order to give meaning to the present and to speculate and make plans concerning the future." (P. 161)

Local 1 experienced the following historical events, which formed the context in which the discourse about IT strategies took place:

- previous profitability problems;

- failure of previous systems;

- board of directors' scepticism about IT;

- lack of willingness to spend on IT; and

- change in the top management team.

The above historical events influenced the bank's approach towards building its new IT scene and thereafter its future strategies and initiatives. as this quotation may exhibit:

".. we were going into a phase where the bank had been into operations for three years, had not produced the kind of profits that the shareholders wanted. So it was very difficult for the new management team to come in and say 'hi guys' we are the new magicians, forget about what happened in the past, but because we tell you we are the best. believe us and we will spend ten million dollars and we will give you a lot whole of things. The shareholders would have said hold on, who the hell you are! How different are you from the other guys! Put your money where your mouth is, show us the results and we will start talking to you.."

As discussed in the case studies, the bank adopted a downsized IT environment since this approach was consistent with its cost consciousness. Moreover, the main product champion of the IT scene started with the 'basic systems' and avoided adopting what they perceived as 'complex' systems that required complex IT expertise at their early stages. Their fear of failure spurred them to 'play it safe' as they lacked the competence to implement 'complex' IT systems at that time. Due to their historically negative experience with mainframe systems and in-house developments, the bank shifted their focus to the downsized environment and 'off-the-shelf' application systems. Past experience of the IT strategist with the software vendor played a major role in defining the current as well the future path of the bank's IT initiatives.

Another example is derived from Local 3. The bank experienced the following historical events, which are summarised in the following points:

- Profitability problems;

- deficiency of the old systems;

- change in the board members and top management;

- intimate relationship with the vendor (and consultant clients).

Local 3 followed a different scenario towards adopting its strategies than Local 1, though each were similar in size. Historical profitability problems and the malpractice that had accompanied them, provided positive and encouraging signals to the IT strategists to shift their focus to adopting more formal approaches towards developing their IT environment. This formal approach was similar to that of Local 4 and Local 5, the biggest, and perceived as most successful banks. It may be assumed, by tracing the steps of the big two banks after they (L3) had experienced profitability problems, that the bank's management needed a sense of security and legitimacy. The historical relationship with the vendor and the consultant played a role in shaping the bank's adoption initiatives, as explained in the case study.

The last example is derived from Local 4. The historical profitability problems that the bank went through, in addition to Local 5 initiatives to change its approach to formulating its strategies, were key historical events that spurred Local 4 to change its approach to strategy formulation, including that of IT.

To conclude this section, I argue that the developments of IT strategies were not isolated from the historical events that these organisations experienced. These historical events played a role in either discouraging or encouraging the banks from pursuing a given course of action. The IT strategist(s) played a role in enacting these historical events in their IT strategies and initiatives.

Political power affecting IT strategy / initiatives:

In this section I argue that the exercise of power over the formation of IT strategies is intimately linked to the banks' culture, and influences the discourse about the IT initiatives within these banks.

Within the local banks, the IT strategies and initiatives were perceived as being the prerogative of the top management.

Within the three formal banks, Local 3, Local 4 and Local 5, the IT strategies were formulated within System Steering Committees (SSC). The number and position of the participants in these committees may differ from one bank to the other; however, in all three banks, IT affairs were perceived as being the prerogative of top management, who participated in these committees. In one of these banks, L5, the head of the SBUs aired concerns about their lack of representation on these committees. As will be discussed later in this chapter, the head of the SBUs were not part of the SSC. Their ideas and needs were of little importance to the bank's IT strategies at certain stages of the bank's strategic developments.

As to the other small local banks, Local 1 and Local 2, which adopted more informal approaches towards their IT strategies, the power of developing IT strategies and initiatives was concentrated within the hands of the sole product champions. Differences, however, occurred within the two banks. In Local 1, the product champion of IT initiatives was the operations manager, and he was perceived and trusted by the bank as being the most expert in this area. His power emerged from his expertise. His role was to sell his ideas and vision to his colleagues in the top management and then to the board of directors to gain their support for approval of any IT investments. By being an operations manager from a support unit, he knew the limits and the boundaries that his proposals should not exceed. In contrast with Local 2, Local 1 IT initiatives were more determined by the head of the bank. His power came from his authority to which the rest of the organisation had to comply. Any ideas coming from the different

stakeholders within the bank should be consistent with his vision and perception before they could flourish. If they were not consistent, they would fail.

Finally, the foreign banks' IT strategies were perceived as the prerogative of the headquarters and regional offices. The local committees within the foreign banks played the role of lobbyists. Their political struggle with the head or regional offices was aimed at enhancing their local positions, which suffered due to the remoteness of the arena in which IT strategies were formulated.

Metaphors, organisational culture and the adoption of IT:

There have been a number of researchers who asserted the importance of metaphors in understanding the realities of organisations. For example, Kendall et al (1994, p. 38) wrote that ".. there are four main functions for metaphors: supplying concreteness or actualisation of an abstract idea; clarifying the unknown; expressing the subjective; and assisting thought (Weaver, 1967, pp252-257)". Others, like Morgan (1986, p. 12&13), argued that ".. our theories of organisational life are based on metaphors that lead us to see and understand organisations in distinctive yet partial ways... By using different metaphors to understand the complex and paradoxical character of organisational life, we are able to manage and design organisations that we may have not thought possible before" (cited in Kendall et al. 1994, p. 38).

The informants within the banks used metaphors and analogies in their narrative description of their IT adoption experiences. These metaphors and analogies aided in demonstrating the informants' world views within these banks. Moreover, they represented the influence of the banks' cultures on IT adoption strategies and initiatives. Clark (1995, p. 2) claims that ".. it is now generally accepted that strategies are both rooted in, and partly explained by, organisation culture".

The following is a classification of the banks' cultures based on these metaphors. It is necessary to mention that the characteristics forming these metaphors' cultures were not mutually exclusive amongst these cultures. Some of the characteristics might be shared across the different metaphors. However, with some metaphors there were some characteristics that were more salient to that culture than the others.

The 'Catholic Marriage' culture:

This metaphor was originally used by the CEO of Foreign 3 when he wanted to describe the role of IT to his bank. Under the catholic marriage metaphor, the relationship between the bank's business strategies, ability to compete and survive, quality of service, and IT was perceived as inseparable and of a permanent nature, just like a 'Catholic Marriage'.

There were other characteristics present in this culture. These were:

- the financial strength of the organisation;

- top management support and evaluation of the IT systems based on their strategic importance rather than their cost;

- a competent IT department with the ability to define its future destination independently from the direct influence of vendors;

- participation of the key bankers in the design of the IT systems;

- clarity of business objectives;

- dependence on IT for product delivery; and

- the percolation of MIS to influence the different functional areas, especially that which enabled the consultancy services business.

In the 'catholic marriage' culture, the Foreign 3 IT department role was changed from a cost centre to a revenue centre, selling its services and products to siblings and rivals alike.

As mentioned earlier, other banks may share some of the catholic marriage culture characteristics, as the characteristics of different cultures are not mutually exclusive.

The "Daring" culture:

I have used this metaphor to describe the culture of the two big local banks, Local 4 and Local 5. This culture shares some of the characteristics of the catholic marriage culture. In addition to that, it fosters attributes that encourage stepping forward and institutionalising systems and IT related services that were perceived by other banks as being highly risky or not feasible to introduce.

These two banks were focusing outward in their IT strategies, to go beyond the banks' boundaries. Their focus was on the retail market. The cost of their 'beyond the boundaries' systems was high. Moreover, they needed a long time to take off in the market and gain public acceptance. EFTPoS was the main example of IT systems that the other banks did not dare to introduce, due to its perceived high cost and uncertain returns. The two local banks faced limited success with their newly introduced EFTPoS services, especially with the absence of a switch shared network in the market.

The other example of a high cost and radical IT system, aimed at transforming retail banking services to re-define the business network relationships[1] based on sharing rather than retaining IT, was the shared ATM network proposed by Local 4. The proposal created tension in the market and direct competitive clashes between the two big local banks. Despite the failure of Local 4 to implement its proposed system, its initiative was the catalyst that precipitated the introduction of the shared network and therefore overcame the inertia that prevented the other banks from introducing such shared network systems despite their awareness of its strategic benefit to them. The banking

---

[1] refer to Venkatraman's (1991, 1994) 'five levels of IT-enabled business transformation' in the literature review chapter.

industry in Bahrain was therefore transformed into a new phase, in which the isolated utilising of IT was broken by a collective IT utilisation initiative. This initiative maximised the potential benefits from embarking on IT within the retail business. The two banks initiatives' therefore institutionalised new retail services and systems that became the norm that the others conformed to.

The daring culture was embraced by banks with a strong capital base. The shareholders and board members had a strong bargaining power within the banking industry to introduce, constrain, or alter any IT related agreements affecting their strategic posture within the market. They were driven by their mission statements to maintain supremacy over the local market, which encouraged them to take the risk of introducing systems not introduced before in Bahrain. They were willing to spend liberally on their wide scale IT systems because of their strong financial base. Their top management support and commitment was perceived as being crucial for their success. Both banks perceived following a rational approach towards formulating their business and IT strategies as a prerequisite to their success. Both banks aimed at grooming their IT managers' skills, either by sending them on courses and training programs abroad or through recruiting from reputable foreign banks.

The "Demanding mistress" culture:

Reference to the "demanding mistress" was made by Foreign 5 and Local 2. In this culture, IT was perceived as a source of escalated cost to the bank, which conflicted with meeting the immediate interests of the shareholders[2]. Any provincial upgrade in the infrastructure required snowballing upgrades to the other areas of the old IT infrastructure. Both banks were at a standstill for a relatively long period and both suffered from their old IT infrastructure deficiencies. IT in this culture was perceived as very demanding and small banks were unable to keep abreast of developments because of their smaller customer and capital bases. The cost-benefits of IT were perceived as unfavourable. The banks' decision takers were more sensitive to the cost of the systems

---

[2] Both banks had had local shareholders even Foreign 5 as it was a joint venture bank.

and the payback period than the strategic implications of the systems. Moreover, there were no references made to formal business strategies, apart from the annual budgeting, nor to formal IT strategies. Commitment from the top management or the group to devoting resources was lacking in this type of culture. Moreover, this culture was more sensitive to negative experiences and failure stories than the successful ones. The decision makers, as in Local 2, were described as being 'cool tempered', resisting the lure of technological changes taking place around them. Decision taking with regard to IT systems took a long time. It was driven by the views of the head of the bank, i.e. L2, or the headquarters, which lacked commitment, i.e. F5. In both banks, top management demanded a cost justification of their systems. In addition to the above, in one of these banks, L2, the culture encouraged deference to authority despite the doubts that some may have had about the views of that authority.

In this culture, inertia was high due to the lack of top management or group support and an unwillingness to depart from the status quo. Moreover, the IT departments were under-resourced, e.g. in Local 2 there were only two personnel running the IT scene, responsible for the internal development of IT systems, as well as running day to day operations.

There were references in this culture to IT initiatives that were of an ad hoc nature and were not central to the banks' business goals. For example, F5 embarked on an IT project to patch its old batch-oriented system with an on-line system that ran on a limited scale, to try overcome some of the operational deficiencies of the old system. It is worth mentioning that the other banks were fully operating on-line systems. Another example is from L2, when the bank focused on automating the islands of operations[3], such as printing 'loan certificates' which were of minor importance to the banks' business.

---

[3] These peripheral initiatives were run by the IT manager and needed no significant investments.

The "Play it safe" culture:

The main feature of this culture, which characterised Local 1, is its cautious approach to spending on IT systems. The previous failures of IT systems cast dark shadows on the decision makers' belief in the capacity of IT systems to create business opportunities for the bank. The bank's small customer and capital bases were behind the bank's sensitivity about substantial spending on IT.

The IT manager in this culture managed to differentiate his bank from the banks falling within the 'demanding mistress' culture, enabling his bank to overcome the bank's old infrastructural deficiencies through adopting a downsized and open IT environment with an efficient 'off-the-shelf' applications system. Unlike the 'demanding mistress' banks, this bank was able to balance its high sensitivity to cost with its IT requirements through adopting an affordable but efficient downsized IT infrastructure. The expertise and past experience of the sole product champion, who was the operations manager, was crucial to the bank's success in developing their new IT scene.

This type of culture enabled a 'lemming' approach to IT systems, in which traditional IT systems that depended on 'off-the-shelf' packages were deployed mainly within the boundaries of the bank. The 'play it safe' culture avoided radical and expensive initiatives, such as that of the 'daring' culture, e.g. EFTPoS and ATM sharing systems. The 'play it safe' adoption criteria instructed the bank to play the game safely by not deviating from the basics and the norms within the market.

The 'others do the thinking and do the doing' culture:

This phrase was used by Foreign 6. In the 'others do the thinking and do the doing' culture, the IT scene was more dependent on the headquarters or regional offices than the local branch resources. This culture embraced the branches of the foreign banks operating in Bahrain. The top management of these branches in Bahrain played a less vital role in the adoption process of IT than the local banks' top management.

The 'trickle down' nature of IT adoption[4] caused a slow pace in the adoption process, and resulted in minimal or incremental changes in the banks' IT environments. Some of these banks reported deficiencies in their systems, the extreme case of which was Foreign 5[5] batch systems, which had put the bank at a competitive disadvantage as compared to the other banks in Bahrain.

The IT systems embraced by this culture were, to a great extent, of a global nature. The advanced banks embraced sophisticated global IT systems, such as Foreign 6's electronic banking system and Foreign 1's 'Cash Management System'.

The IT managers only needed skills to implement the ready made systems, most of which were released though the banks' global communication lines. The IT scene for most of the foreign banks was run by the operations departments and there were few developments, if any, taking place within these banks in Bahrain.

The 'others do the thinking and do the doing' culture was less sensitive to stimuli coming from local competitors, and therefore the foreign banks in Bahrain were less responsive to the competitive pressure coming from the local rivals.

The main source of change within this type of culture came mainly from the head or regional offices. This centralised approach to the IT developments was the source of inertia within this culture. Moreover, the centralised approach was a source of complaints and resentment, e.g. Foreign 2 and their complaint about their slow IBM system that preceded the AS 400; Foreign 5's complaint about their IT systems that put them at a competitive disadvantage to the other banks, and Foreign 6's complaint about their MBS, which did not meet their local requirements.

---

[4] Priority was given to the major international markets. Markets such as the Bahraini received the new developments late as compared to the major international markets.

[5] Though F5 belongs more to the 'demanding mistress' culture, it shares some of the characteristics of the 'others do the thinking and the doing' culture such as its dependence on the head office in acquiring their IT systems.

Radical changes in culture:

A phenomenon that was unique within the local banks, as opposed to the majority of the foreign banks, was the radical changes that occurred in the culture of four out of the five local banks in the case studies. These changes brought with them new ways of thinking and working.

As indicated in the case studies, Local 4, Local 3, and Local 1 experienced a change in their board of directors and / or top management team. Local 5 experienced revolutionary changes without, however, experiencing a change in its board of directors or local top management members. Foreign 3 was the only foreign bank that mentioned a radical change in their culture, which they had approached through adding new crew members to their top management.

Local 5 was the first of the local banks that started the revolutionary change in its culture due to its board of directors' demand to maintain sound revenue in a declining economy. The bank's approach to a consultant, Arthur D Little, began a new era in which the consultant led them into adopting management techniques that he was disseminating internationally.

The other three local banks as *Table 1* indicates suffered from severe losses in the mid-eighties. Local 4 soon followed Local 5 in approaching a consultant to facilitate their transformation process. Their approaching a consultant may have been meant to signal their efforts to distinguish them from the old management, through adopting rational, corrective techniques in prescribing new, efficient means to transform the bank, and hence restore confidence of the main stakeholders. Moreover, L4's practices were a reflex to the practices of their main competitor, Local 5. Local 3 went through the same problems that Local 4 went through. Thereafter, L3, adopted similar approaches to L4 but at a later date.

Table 1: Radical changes	Small banks		Big Banks		
	L1	L3	L4	L5	F3
Reported major losses	*	*	*		
Change in top management and / or Board members	*	*	*		
Groom local top management skills			*	*	
Empower top management with new skilled recruits	*	*	*	*	*
Consultants managed the revolutionary change		*	*	*	
First formal strategic plan implemented in		93/94	91/92	86	88/89

The three local banks, Local 3, Local 4 and Local 5, acted similarly in their response to the change in the economic environment. Their approach to achieving a revolutionary change within their environment was triggered by Local 5's initiative, which stimulated Local 4 to go along the same path. Local 3 was the last to follow the herd. It perceived the big two banks as being more successful. This isomorphism between the main three local banks was triggered by economic factors[6], as well as the desire from the banks' top management to gain the confidence of the stakeholders by following what the banking environment then perceived as a rational norm, to change from the old misconduct practices.

All of the banks empowered their top management with new recruits to enable this cultural change. Two of the banks, Local 1 and Foreign 3, opted to change through depending on their internal resources instead of consultants. As to Foreign 3, the bank was in a sound financial position and was able to empower its top management with staff of the required expertise to direct their new strategic thrust. Local 1, on the other hand, was one of the small banks, and the one with the least financial capabilities. It depended on its operations manager to set its new goals and strategies informally. These were set carefully to follow the traditional banking business and required no sophisticated expertise. It is worth noting that Local 1 was the only bank among these banks that did not have a formal strategy approach.

---

[6] The changing economic conditions such as the drop in the oil prices, the decrease in government expenditure, and the collapse of the regional and local stock markets, created new economic realities that these banks had to respond to. Refer to chapter 4 for further discussion about the changes within the banking environment.

Level of changes:

I referred to the changes in these cultures as being radical, because of how much the change encompassed. Mintzbeg et al. (1992) wrote that change could take place from the broadest and most conceptual levels, to the narrowest and most concrete levels (see Table 2). For change to be effective in transforming the organisation, Mintzberg et al. argued that it should encompass all of the organisational levels. A deductive change happens when change flows from the conceptual levels to the concrete levels. An inductive change, on the other hand, takes place when change flows from the concrete levels to the conceptual levels.

Table 2 : Content of organizational change (Mintzberg, 1992)		
	Change in organization (state)	Change in strategy (direction)
More conceptual (thought)	Culture Structure	Vision Strategic Positions
More concrete (action)	Systems People	Programs Facilities

In five cases there were references to changes in the conceptual levels, as well as the concrete levels.

As to the conceptual levels, Local 5 argued that there was a need to shift the mindset away from the existing paradigms that created the bank's culture. These paradigms were created by the economic conditions. The other banks had a similar vision about the need to change their strategic orientation. Table 3 summarises the new strategic orientation which represented the change in the banks' conceptual level.

	Small banks		Big Banks		Foreign Banks
Table 3: Strategic focus	L1	L3	L4	L5	F3
Expansion in geographical market and in type of business: offering consultancy, wholesale, and retail business					*
Expansion in type of business: commercial banking, widen focus to include retail business in addition to trade finance		*			
Shift from treasury and interbank investment business to local commercial banking business	*				
1986 strategic plans: development of domestic operations; 1994: widen business focus on international markets especially treasury business in G7				*	
Segmented the market, prime focus on retail. Corporate sector defined as an important business. International opportunities potential business for the bank.			*		

With the change in the business focus, there was a new vision related to the role of IT. In all of these banks, their IT initiatives were directed to serve their business goals, e.g. the adoption of retail systems by all of these banks as they focused on the retail business, the adoption of a sophisticated MIS system by Foreign 3 to enable consultancy business, and the adoption of the treasury IT systems to enable international and treasury banking unit business, as was the case in Local 5.

	Small banks		Big Banks		Foreign Bank
Table 4: References to changes in a) structure	L1	L3	L4	L5	F3
Introduction of SBUs			*	*	
Creation of corporate planning units			*	*	
Flatter structure to enhance communication		*			
b) Change in the position of IT manager			*	*	*
IT manager member of top management committee	*		*		
Change in the nature of IT department			*	*	*
Previous IT manager heads the branch network		*			

The above changes were accompanied by changes in the structure of the banks (see Table 4). Local 4 and 5 restructured their organisations and introduced SBUs, in addition to creating strategic planning units, as was the case with Local 5. Local 3, on the other hand, was not as big as the two big banks and therefore was not able to introduce business units as specialised as those of the big banks. L3 flattened its hierarchy to enable a faster response to the clients' needs.

The change in structure and positions reached the IT department as well. In Local 4, Local 5, and Foreign 3, the IT department became independent from the operations department and had more resources. In contrast to these big banks, the small banks' IT departments continued to be part of the operations department.

As to changes in the positions, the IT managers became closer than before to the CEO in the big banks, Local 4, Local 5, and Foreign 3. One of the small banks, Local 1, shared this same characteristic in relation to the seniority of the IT manager. He became linked to the CEO and reported directly to him. Moreover, he was part of the top management committee where the strategic aspects of the bank were discussed. Local 3 was the exception, however, in which the IT manager continued to be headed by the operations manager. The IT manager argued that, to avoid filtering his requests, he had to bypass the operations manager to reach the CEO. This point was one of his concerns.

There were other examples of changes in the positions brought by the changes in vision and strategies. In Local 3, the previous IT manager, who preceded the one I interviewed, was transferred to head the branch network, his presence in this position and his past IT experience being perceived as crucial because at this stage Local 3 was expanding its branch network and IT was perceived as the backbone for this expansion.

	Small banks		Big Banks		Foreign Bank
Table 5: Levels of formal structure of strategic planning	L1	L3	L4	L5	F3
Informal planning - One man show	*				
Committees		*	*	*	*
Reference to formal strategic planning:			*	*	*
Formal definition of the business goals		*	*	*	*
Shift from the one man show - multiple stakeholders participating in the discussion / development / evaluation of IT strategies:		*	*	*	*
Shift of power to the bankers participating in the SSC			*		
Shift of power to top management committee				*	

Table 5 illustrates the changes that were brought about by the revolutionary changes in the banks' strategy formation. With the exception of L1 which had an informal approach to its strategy formation, the other banks took a formal approach to e change in
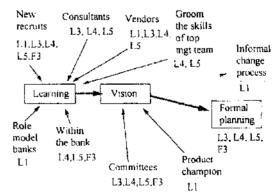
their strategy formation. The strategic goals were more formally stated and committees were formed to look after the IT strategies within these banks. The formation of these committees allowed the participation of different stakeholders in this process, which had become more of a joint venture project rather than a 'one man show'.

At the concrete level, all of these banks experienced changes in their IT systems, examples of which were provided within the case studies. The above changes at the conceptual and the concrete levels were the basis of these banks' revolutionary changes in strategy formation.

Approaches to change:

Mintzberg et al. (1992) described three approaches to change. The first is change by strategic planning. This type of change is deliberate, formal and deductive. The second approach to change is visionary leadership. This approach embraces an informal means of change led by a product champion who 'tends to maintain close contact with the details of the operationaization of his or her vision' (Ibid., p. 43). The third approach to change is inductive learning, which is informal and emergent, in that it can take place anywhere in the organisation. These forms of change are complementary rather than substitutes. Mintzberg's approach to change may provide an account of the radical changes that happened in the Bahraini banks.

Figure 1 describes the process of change within the five banks. The process starts with learning and conceiving the change. There were different sources for this process. Learning could be imported. This was the case with the banks that depended on

Figure 1: Approaches to change

consultants in their learning process, L3, L4, and L5. The relationship in this case was more formal. The vendors, however, were an example of an informal source of the learning process which the local banks depended on. Another informal source of learning was the perceived 'role model banks', which Local 1 depended on. All of the five banks empowered their top management with new recruits who acted as another source of learning, a dramatic example being Local 1. In addition to the above, the two big local banks embarked on grooming the skills of their top management. Learning from within the banks was a main source of change. This was the case with Local 5, which terminated its relationship with a consultant and depended on its internal resources once it had mastered the required skills for formal strategic planning. Local 4 and Foreign 3 provide further examples of learning from within to promote a wider vision. Both banks learned from developing excess capacities from their IT initiatives to capitalise on their IT differently from the others, e.g. the proposal of the shared ATM network and the regional network by Local 4, and the creation of an IT subsidiary company selling IT services to rivals, as well as siblings, as was the case with Foreign 3.

The outcome of the learning process was a vision. This vision crystallised within the committees, e.g. System Steering Committees, as was the case with Local 3, Local 4, Local 5 and Foreign 3. However, in Local 1, the vision was formulated within the mindset of the IT / operations manager, who was the sole product champion of the IT strategy direction.

The last step in the process of change is the formal planning process, which sets the programs for achieving required goals. Four of the banks, L3, L4, L5, and F3 depended on formal strategic planning for introducing change in their banks. In contrast to these four banks, Local 1 was the least formal in implementing its' product champion's visions, as it bypassed the formal planning phase.

Culture - role of IT matrix:

This section attempts to graft context of change matrix of Boddy and Buchanan (1992) with the banks' cultures discussed earlier in order to enrich understanding of the adoption behaviour amongst the Bahraini banks.

The Boddy et al. matrix (Boddy and Gunson, 1996, p. 191) has two dimensions. The vertical dimension represents the perceived scale of change (from radical to incremental), while the horizontal dimension represents the centrality of change to the primary task of business (from core to. peripheral).
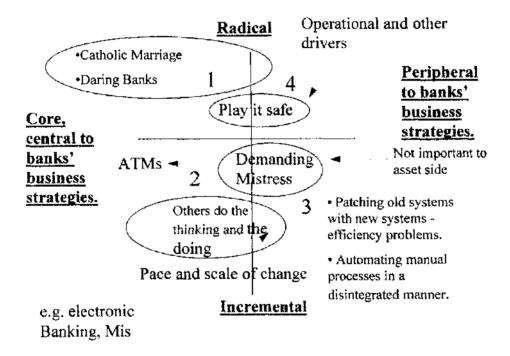
Figure 2: change matrix based on Boddy and Gunson's (1996) matrix.

Figure 2 maps the different cultures on a two dimension matrix similar to the Boddy et al. matrix. However, the horizontal dimension of my matrix represents the centrality of IT to the banks' business as inferred from the main IT developments and the role of IT categories discussed within the case studies. The vertical dimension, on the other hand, represents the degree of cultural change within the banks.

Quadrant 1 of the matrix embraces the 'Catholic Marriage' culture and the 'Daring Banks' culture. All of the banks in quadrant 1 experienced radical changes in their cultures, as explained earlier. As to their IT systems, the 'Catholic Marriage' culture and the 'Daring Banks' cultures promoted IT systems that were closely linked to their business goals. However, these banks also reported that they were embarking on IT systems that were not linked to the competitiveness of some business areas. To the retail business, IT was strategically valued. However, to the commercial and corporate banking business IT played a marginal role in serving the banks' business and was mainly directed at enhancing effectiveness within these units. This example is indicated by the part of the ellipse that extends to quadrant 4.

As to the 'Play it safe' culture represented by Local 1, they also experienced a radical change in their culture, as indicated earlier, which places them on the upper half of the matrix. The initial drivers for their main IT initiatives were operational ones and institutional ones related to conforming to the institutionalised IT related services, such as credit cards, despite their lack of contribution to the bank's business profitability. In addition to these drivers, there were IT initiatives that the bank was initiating which were perceived as closely linked to enhancing the quality of service. This enabled the bank to compete with others based on the quality of service rather than the type of business. These IT initiatives were related to the bank's front desk operations, enabling tellers to perform different transaction types from one location and in the least possible time. Based on the above accounts, the 'Play it Safe' culture may best fit between quadrant 1 and 4, hence embracing core and peripheral IT systems.

Quadrant 2, on the other hand, embraces the majority of the foreign banks, with the exception of Foreign 3. None of the informants within these banks narrated any change in their strategy formation processes nor in their top management. As mentioned in the case studies, these banks were affected by the changes within the head and regional offices and were more governed by the 'trickle down' effect of their IT strategy than the local changes within Bahrain. The inference is, therefore, that these banks experienced incremental changes, if any at all, in their culture over time and therefore should be

located at the lower part of the matrix. These banks argued that their IT systems were more geared to serving their business goals. This was the case, for example, with the 'Cash Management' electronic banking system of Foreign 1, which was directed towards their main clients, the international corporate companies. Another example is Foreign 2's adoption of the IBM AS 400 and the PC and LAN platforms to provide an on the spot response to their regional clients outside Bahrain, without needing to have a physical presence there. Based on this account, the foreign banks may best be located in quadrant 2, which represents cultures experiencing locally incremental change, or possibly no change, yet adopting core IT systems. There were, however, some IT systems that these banks adopted due to their global IT strategies, that had a peripheral link to their business in Bahrain. An example of this may be Foreign 6's sophisticated electronic banking that was perceived by the corporate banking manager as playing a marginal role in serving their corporate banking business or in creating a competitive advantage over the others. This was also true of their MIS system which was considered a bane by the management, rather than a support. Therefore, part of the 'Others Do the Thinking and the Doing' ellipse falls within quadrant 3 because of the ephemeral role some IT initiatives played in the local business requirements of these banks.

The 'Demanding Mistress' culture falls mostly within quadrant 3. The banks in this quadrant experienced no radical change in their culture. For example, the GM and the other top management personnel in Local 2 had been almost the same since the inception of the bank, and there was no reference given by this bank to any changes to their approaches in formatting their strategies. The power to make strategic decisions was always seen as being the prerogative of the top management, especially the head of the bank, whose vision was the centre of the bank's processes and strategies, including that of the IT, throughout the entire life of the bank. The IT initiatives that these banks discussed were peripheral to their business, for example, Foreign 5's initiatives to patch its batch system with an on-line system, as mentioned earlier, and Local 2's focus on automating the manual processes within the different functional areas and attempts to conform to the institutionalised retail IT systems, e.g. phone banking, despite their perceived low value to the bank's business. Having said that, some of the IT initiatives

were central to the banks' business mainly due to the sectoral nature of the banking industry that required a minimal level of IT to support the banks' 'bread and butter' business requirements, for example, integrating the different branches electronically or adopting ATMs. Therefore, part of the 'Demanding Mistress' culture has to fall within quadrant 2.

Fiol (1996) used the 'sponge' metaphor for explaining organisations' ability to absorb knowledge and thereafter innovate:

> "To explore an alternative source of our inconsistency problem, I invite you to think of organisations as sponges. They have more or less capacity to absorb new knowledge, not unlike sponges that have differing capacities to absorb a liquid. Depending on their absorptive capacity and on their ability to reconfigure what they have absorbed, organisations also have more or less potential to generate outcomes, not unlike sponges that are limited by the amount of the nature of what they have absorbed. Though not labelling firms as sponges, Cohen and Levinthal (1990) introduced the analogy indirectly in their argument that innovative output is dependent on the prior accumulation of knowledge that enables innovators to assimilate and exploit new knowledge." (p. 1013)

Based on the above, I argue that the 'catholic marriage' and 'daring banks' cultures, which are located in quadrant one, seem to be more able to absorb knowledge. The banks' relationship with their vendors and with the consultants, the new recruits and the groomed skills of their employees enhanced these banks' ability to absorb new knowledge and hence be more able to 'innovate'.

The radical changes in culture that L1 experience, increased the absorbency ability of this bank, and enabled it to produce IT solutions that were more efficient in meeting the banks' IT needs than those banks which embraced the 'demanding mistress' culture, in spite of L1's 'play it safe' approach. However, the other characteristics within the 'play it safe' culture made this bank less innovative than the banks which belonged to Quadrant 1 of the matrix, the 'catholic marriage' and the 'daring banks'.

The banks which were least able to absorb new knowledge were those located in Quadrant 3 of the matrix, which belonged to the 'demanding mistress' culture. These banks experienced little change in their culture, as explained earlier, and were less radical in their IT initiatives.

As to the 'others do the thinking and the doing' banks, their absorbency ability was less influential on the banks' adoption behaviour, as these banks depended on their headquarters and regional offices to obtain their strategies and systems.

Cultural Gap:

In the case studies, there were symptoms of a cultural gap that existed within the banks. The source of this cultural gap was the lack of congruence between the bankers who had the ultimate power to adopt the technologies, and the technologists who played an advisory role. In some of the banks, the technologists argued that, despite the general appreciation of the bankers of the role of IT in the business, they were short-sighted and unable to comprehend the different aspects of the IT systems proposed by the technologists.

One of the symptoms of this gap was the delay in the adoption of some systems by these banks. This can be attributed to a lack of the GM support, e.g. Local 2, a clash of interests amongst the board members, e.g. Local 4, a lack of board support, e.g. Local 3, and a delay in group support, e.g. the foreign banks.

Tension was present between the bankers, on one hand, and the IT departments, on the other in some of the cases. The source of this tension, in Local 4 for example, was the inability of the top management to assess the IT manager's expensive proposals (this was prior to the formal strategic planning approach). The other source of tension was due to the prescribed role of the IT department falling short of the expectations of the users. This tension was created by poor communications with the IT department, lack of a top management mandate to support some of the functional areas, and the exclusion of the head of the SBUs from the System Steering Committees, as was the scenario in L5.

In some of the banks, the cultural gap was because of the lack of a clear vision about who should be responsible for marketing the IT related products, the technologists or the bankers. An example of this case came from Foreign 6. The bank offered its key corporate clients its sophisticated electronic banking system free of charge, to create a habit of banking through the electronic system among the corporate clients. There was a dispute within the bank over who should be managing this IT delivery system - the corporate banking manager or the IT manager. The IT manager was held responsible for the system, but he believed that the electronic banking system needed marketing efforts rather than technical efforts and hence should be managed by a business unit, rather than an IT unit.

As to the foreign banks, the cultural gap existed between the branches in Bahrain and their headquarters and regional offices. Tension between the branches and the regional offices was reported as a result of the lack of sufficient support or responsiveness these banks received from the centralised offices. These branches found themselves in continuous strife for IT resources over which they had little control. Moreover, dissatisfaction with the banks' systems was reported amongst some of these banks. The compulsory adoption of the systems from the headquarters or the regional offices created resentment in the users of the foreign banks. As Local 6 reported, some of their IT systems were perceived by their management as a burden rather than a benefit. They had to meet these demanding but unappreciated requirements mainly because the headquarters forced them to do so.

Another dilemma within the foreign banks was related to the development of global systems. Because these global systems were so expensive to develop they threatened to overrun their budget, which forced the technologists cut corners. The outcome was systems that fell short of the users' expectations - some of these systems were technical rather than user oriented - which the users worldwide had to put up with for a long time due to their long life expectancy. Tension between the technologists and the users, who accused the former of developing systems unable to meet the bankers' needs, and the

technologists and the group top management, over the allocation of resources were signs of the cultural gap.

Role of the IT manager and the cultural gap:

The prescribed role of the IT manager was, in some instances, one of the ingredients of the cultural gap within the banks. Local 5 and Foreign 4 raised the issue of the need to change the role of the IT manager.

The IT manager's role was perceived as that of an 'order taker'. In all of the banks the IT managers' role was advisory to the bankers, and when they were less interested in hearing from them they just 'shut him up':

> "... sometimes I have to be quiet in these meetings. I try to use them as a platform to tell them what is going on or what the technology has to offer. Sometimes they are interested enough, then they will ask me to pursue things, or sometimes they will tell me to shut up.." IT manager.

In some of these banks, the 'order taker', passive role of the IT manager did not enable him to question the bankers orders so that he could provide what they needed instead of what they just wanted.

There were appeals by some IT managers, e.g. Foreign 4's IT manager, to enable them to play a more active role in the process of business products/strategy developments through enabling them to participate in this process at an earlier stage, rather than at the end of the process when the decisions had already been taken. Others, e.g. Local 5, appealed for enabling the IT manager to play a proactive role rather than the passive and reactive role that he usually played. They believed that the implications of IT for business were becoming more complex, and thus, hard for the banks to keep pace with.

The cultural gap between the bankers and the technologists continued to occur due to the persistence of a culture legacy in which the bankers perceived themselves as having the ultimate decision making power. This was a throwback to the old days when IT was perceived as having merely a data processing role. Despite the claim that the IT department has transferred into the strategic IT era, the bankers continued to perceive

the technologists as subjects who had to assimilate the bankers' views rather than participate in making them. The relationship could be described as one of bondage, in which the bankers still maintained a superior role, rather than a mutual marriage in whose affairs both partners had a say.

External cultural gap:

There were references to an external cultural gap that existed between the banks and the regulatory body. The gap arose due to the different postures the two parties took with regard to the IT initiatives some of these banks wanted to introduce into the market. The consequences of the cultural gap could be important to the banks because of the influential role the regulatory body played within the banking industry, as was discussed earlier in the thesis. One of the 'daring' banks gave me examples of its attempt to introduce an IT based retail product. The informant within that bank claimed that its initiatives were delayed due to the lack of awareness of the regulatory body about the business implications of these IT based products for the bank.

Inertia:

Inertia was one of the factors that affected the adoption of IT within the banking industry. The sources of inertia could be attributed to environmental ones that existed outside the boundaries of the banks and to internal sources that existed within the banks.

Regulation was one of the external sources of inertia within the banking environment. The Bahraini banking industry is tightly regulated. These regulations play the role of safeguarding the banking industry from slipping into any malfunctioning practices. However, the regulatory aspects also played a role in slowing down, in some instances, the pace of IT adoption (refer to the shared ATM case study in chapter eight).

Other sources that decreased the banks' manoeuvrability with regard to the type of IT platform was their dependence on their vendors in acquiring knowledge about the IT environment. By restricting themselves to one channel of biased information, e.g. information about IT systems promoted by the partner vendor(s), these banks became less adaptable to changes that occurred beyond what their vendors offered, despite the possible efficiency of other alternatives. For example, downsized technology might be more appropriate to the Bahraini small banks, which were more cost sensitive, than a costly mainframe technology of the vendors, who were the main source of information to the banks.

Table 6: Internal Sources of Inertia as Discussed in the Case Studies

High sunk cost in investment in IT and in learning

Lack of top management support / group support

Lack of board support

Perceived high cost of the technology

Skepticism about the value of the systems

Lack of internal marketing

Resistance to shift from the established norms of doing things

Lack of appreciation from the users to the implication of IT to their business

Mentality of the old generation

Loss of faith in IT due to previous failure and cash drain with IT systems

Lack of encouraging banking culture

Profitability problems

Lack of financial strength

Table 6 lists some of the internal factors that contributed to creating the inertia. The first of these factors is the high sunk cost of investment in IT and in learning to work with these technologies which created stagnation with the banks' old systems for long period of time.

There were references to inertia that occurred because of the top management, the board of directors, or other personnel at the lower levels of the organisations. The most serious sources of inertia came from those who were at the top management or on the board of directors. As mentioned in the cases, some of the banks that were suffering high inertia because of lack of top management and board support managed to overcome this problem when revolutionary changes took place at these management levels.

There were also references to inertia that was caused by the users' resistance to accepting the new technologies. Another factor causing inertia was a loss of faith in IT, as a result of previous negative experiences with IT systems.

The level of inertia varied depending on the banks' culture. In the 'demanding mistress' and the 'play it safe' cultures, inertia was higher than in the 'Catholic marriage' and 'daring banks' culture. As to the 'others do the thinking and do the doing culture', inertia existed as a result of the slow responsiveness, or lack of responsiveness in some cases, to the banks' local IT needs.

The last source of inertia was the profitability problems of these banks. Both the 'demanding mistress' and the 'play it safe' cultures stipulated that no investments in IT could be made unless the banks were in sound financial positions prior to taking these decisions.

IT related concerns:

The following list represents the concerns of the banks as narrated by the informants.

- **Regulations within the industry**: Tightly regulating the IT scene within the industry may restrict the full exploitation of IT beyond the banks' boundary. It may decrease the banks' innovation in this area as well.

- **Overcentralized IT decisions**: The excess centralisation of IT decisions away from the foreign banks' branches were a source of deficiency in some of these banks.

- **Quantifying IT projects**: The practice of justifying the returns of IT projects to the top management and headquarters was problematic to the IT strategists.

- **High cost of training**: The high cost of training was one of the barriers that decreased the IT departments ability to overcome the inertia within the banks.

- **Deficiency of IT systems**: The previous system's legacy was a concern to the IT departments which disabled them from meeting their business goals.

- **Underresourced IT departments**: The allocation of sufficient resources was a concern of the IT managers who were overburdened with a long wish list.

- **Availability of Experts**: Expertise within the IT area was an expensive resource that was in high demand among the banks. Some of the banks tended to groom the skills of their IT personnel. However, the turnover of experts was high because of the failure of some banks' human resource policies to recognise the technologists' 'new' strategic role.

- **The tenure of expatriate managers**: The tenure of the expatriate managers and their influence on IT strategies was a concern as aired by Local 4. The concern was raised due to the perception that these managers may take decisions they won't live with in the long run due to the nature of their short term contracts.

- In addition to the concerns listed above, securing sufficient top management support and bridging the cultural gap were amongst the concerns of the informants.

Attempts to bridge the cultural gap:

Some informants believed that the radical changes that took place in some of these cases, and the new measures that were introduced, played a role in reducing the wide cultural gap that had existed prior to these changes. The following, are some of the factors that played a role in this reduction.

453

Committees as a mean for gaining a mutual understanding:

It was claimed that the committees within the banks played a role in creating a mutual understanding among the participating parties. This was achieved through enabling the different parties to air their concerns and beliefs and subsequently reach a vision. Despite this argument from the banks, a cultural gap still existed in many of the banks. mainly due to the passive role the IT manager played within these committees.

There was a tendency from some of the banks, e.g. Local 5, to change the profile of the characteristics of the IT manager as a means to bridge the cultural gap. To rehabilitate his thinking in terms of business needs, the Local 5 IT manager was sent to acquire an MBA degree. However, the new qualification acted only as a veneer on the top and did little to bridge the cultural gap as long as the old paradigm perceiving the IT manager as an 'order taker' continued to rule.

Training:

Training was one of the measures that were followed to rehabilitate the users. With the introduction of their new PC environment which aimed at enabling the bank to provide a prompt service to the overseas users, Foreign 2 perceived training as essential to enable the bank to exploit the system's potential benefits. The bank's top management commitments and financial support were essential to provide this measure to overcome the inertia problem.

Other banks perceived re-educating as being crucial to overcome the inertia problem. However, this claim was an empty gesture when it lacked the support of the resource controllers. An example was Foreign 6's IT manager's vision which was not supported. due to the centralisation of the resources with a regional office that resented spending on such a project.

Need for changes in human resource policies:

Changes in human resource policies were perceived as part of the overall changes required to bridge the cultural gap. Some banks, e.g. Local 3, which complained of high IT personnel turnover, did not introduce changes in its human resource policies as a result of the new job requirements brought about by their IT environment. For example, Local 3 did not alter its IT payments to compensate their IT personnel for staying beyond the normal working hours, as did the other banks. This failure to alter the human resource policies created problems for this bank.

Other banks perceived linking promotions and rewards to the ability of their employees to adapt to their jobs' new IT requirements. These banks believed that this approach was essential to exploit the potential benefits of their recent IT developments. An example of this came from Foreign 2. They followed what they described as 'carrot and stick' policies. They claimed that they linked their promotion to the employees' ability to adapt to the new work environment and learn the new skills dictated by it (the "carrot"). The stick was to show less interest in the habits of the older generation and replace non-adaptable employees, with younger, more adaptable employees. They claimed that their appraisal evaluated how well their employees could cope with their new work environment.

Other banks, e.g. Foreign 3, claimed that they, as new banks, sought IT literacy skills in new recruits.

Shift in existing paradigm:

There were calls for shifting the existing paradigm about the role of IT manager to a proactive role. The new paradigm aimed at enabling the IT managers and the bankers to set their goals mutually and to work in a partnership. To achieve this, Local 5 suggested linking the IT managers' promotions with the ability of their business partners to achieve their goals.

Chapter Twelve

Conclusion

Introduction:

This thesis aims to produce an understanding of the context within which IT in the commercial banking sector has evolved in a developing country, Bahrain.

The context within which IT is embedded may be concerned with the organisation, its history, its culture, and the micro-political power within which the actors directing IT manoeuvre. It may go beyond the organisation, to reach the economy or the industry within which the organisation operates. Or it may be concerned with the subtle set of contexts which are relevant to social construction in the mind set of those involved with directing the IT scene, and their perception and interpretation of reality. All these sets of contexts may interact to affect IT adoption behaviour.

The elements of the IT contexts were spelt out within the thesis chapters. In the "Bahrain Financial Services Sector" chapter, I described the scene in which the banks of my case studies were operating. This chapter discussed the main historical economic issues that affected the banks' performance, which is one of the context elements that intertwined with other elements and affected the development and the adoption of IT. The "Collaboration" chapter discussed the institutional factors within the banking environment and their influence on collective IT projects. The "Strategy" chapter explored IT strategy processes within the commercial banks, and the drivers of these initiatives. The "Banks' Relations and Networks" chapter discussed the nature of the banks' relationships with other organisations and their effect on shaping IT strategies/

.

initiatives. Finally, the "Culture" chapter discussed the influence on the banks' history, political power, and cultural change, among other elements, on IT.

Much of the literature about IT "reflects a rational-economic interpretation of organisational processes, and a positivist methodology which is based on the view that the world exhibits objective cause-effect relationships which can be discovered, at least partially, by structured observation." (Walsham, 1993, p. 4). My stance, however, is more aligned to that which perceives a pluralistic nature to reality. The rational-economic account represents only one aspect of this reality, which requires attention to other complementary aspects as well. I therefore contend that IT adoption and IT strategy evolve within multifaceted contexts consisting of elements such as the economy, the sector, the organisations' history, the organisations' cultures, and their political processes, to name some of the important elements of this context.

The industry context:

In Bahrain, IT evolution was influenced by the industry context. Economic changes and their consequences on the banking industry, and the level of regulations were important elements of this context and directly or indirectly influenced how the banking community approached IT.

The economic element:

During the boom period, the late seventies and early eighties, the banks, especially the domestic ones, enjoyed a surplus in their liquidity. During that period, none of the domestic banks had strategic plans, nor were they under pressure to present themselves as strategic planners, due to their relatively solid financial position and lack of any external pressure.

The recession that occurred in the mid eighties, and the debt problems that many of the key banks suffered during that period represented the context that influenced the incursion of strategic discourse within some of the domestic banks, as explained within the analysis chapters. Some banks, especially those that suffered profitability problems, mimicked the leader banks' strategic formation behaviour as a means to appear more rational and progressive in dealing with the gap opened up by changes in the environment, and to gain thereafter approval and support of the central bank's and other stakeholders'.

Some of the key banks shifted their focus to the retail business and gave personal lending more attention. The banking community soon aped the leaders' behaviour. Though the personal lending and retail business were open to all banks, exploiting this business niche took place only after some banks had gone in that direction. As mentioned earlier, one of the leading banks in the retail business described the mimetic behaviour of the other banks as a 'lemming behaviour'. This lemming behaviour was present in the banks' approach to retail IT systems as well. Initially, there was an adoption gap between the big local banks, which spent more liberally during the depression period despite the profitability problems that some of them had, and the local small banks. However, once the IT systems, e.g. ATMs, phone banking and credit cards systems, were institutionalised in the Bahraini banking industry, the lemmings soon followed the leaders, despite the cost and efficiency implications of some of these systems to the adopters.

The regulatory context:

The regulations within the banking industry represent an important context that affected the banks' adoption behaviour and their strategic actions.

As mentioned earlier, the banking industry was tightly regulated and protected by the regulatory body. This institutionalised aspect of the banking industry determined how the banks provided their IT related products and services, how they competed or

collaborated amongst themselves based on using IT collectively, and how similar they were in adopting some IT systems in response to the regulation requirements.

As mentioned in the case studies, the regulations defined what was acceptable and what was not acceptable as to the way these banks deployed IT to their customers or designed their IT services. For example, before the introduction of the shared ATM network, all banks ruled out the possibility of providing a stand alone ATM service as the introduction of this type of service was not feasible due to the regulations.

The regulations also dictated that all of the banks had to acquire certain IT systems though these systems were not linked to these banks' strategies nor were they related to their efficiency. Such regulations were the source of coercive isomorphism amongst the banks.

The most important effect of the regulations was in the way in which these banks approached IT collectively. In the regulated environment, redesigning the banks' business networks, and collaborating or competing based on using IT collectively were not feasible beyond the regulatory body "umbrella". Stated differently, the success of any collective IT projects depended on how well they conformed to the regulatory body culture and regulations.

The protection that the banking industry experienced, excluded non-banking institutions from competing with the commercial banks in providing bread and butter banking services, and identified market boundaries beyond which each type of financial institutions could not go. One of the Islamic banks at a given time enjoyed a monopolistic advantage in the market niche that it was targeting since no other institutions were able to provide similar banking services to that niche. This protection created a relatively stable environment in these banks which may explain their lack of innovation over a long period of time, and the lack of strategic discourse pressure they felt.

Strategy formation:

Strategy formation within the local banks:

Knights and Morgan (1995) described strategy formation as discontinuous, accidental, contested, and uncertain. There are resemblance between some of the characteristics of the strategy formation process as described by Knights and Morgan and that of the Bahraini local banks.

The strategy formation for the majority of local Bahraini banks went into different maturity phases. The pattern of development differed significantly between the early phases and the late phases of development. During the early phases, the strategy formation was informal for all of the banks. The small banks' strategies were more ad hoc in nature, were disconnected to business goals, and perceived technology as a source of additional expense. There were periods of standstill between major IT developments, if these developments took place at all. As for the two big banks, they described their strategies then as informal. However, these strategies were emerging incrementally from the banks' decision making processes, some of which were related to strategic goals. During the early phases of strategy formation, the failure rate and dissatisfaction in IT projects were high as these banks lacked the expertise to handle the IT scene. The IT managers were the main visionaries during this phase. However, they lacked the power to push their views forward, and tension characterised their relationship with the top management.

The later phases of the strategy formation process differed from practices in the early phases, particularly with reference to L3, L4, and L5. Their strategy formation process took the form of formal and planned strategies. These strategies were of a top-down nature stemming from the banks' business goals, as these banks argued, and a bottom-up nature stemming from assessing the banks' infrastructural needs. Fincham et al. (1994) argued that knowledge and strategy are influenced by the formation and deployment of expertise. For these banks, a main source of expertise came from the consultants that the three banks contracted with. These consultants propagated a

formal-rational prescription to the strategy formation process. The Systems Steering Committees (SSCs) were the bodies that the consultants formed within these banks to handle the strategy formulation process. These committees were formulated from the top management and other key personnel from the support units. The power as to setting the budgets, defining business-related goals, and approving any suggested systems was concentrated within the top management. However, when it came to delineating infrastructure requirements, ability to meet business goals, future perspectives, and determining other technical issues, the IT managers' input to the strategy was essential. The SSCs, then, were the crucible in which the interaction between the visions of the top management and support units shaped the strategic vision. The case studies also reported reliance on ad hoc committees to implement and follow up the IT strategies. Representatives from the users and the board of directors were members in these committees.

Another form of strategy formation process was ad hoc and entrepreneurial in nature. This was exhibited by two of the small banks, L1 and L2. The strategy process was informal, ad hoc in nature, constrained by the financial budgets, and driven by the vision of a sole product champion. The power of the product champion of one of these banks'. L1, emerged from his expertise. His political skills in convincing his peer managers at the top management and then the board of directors were essential for the approval of his visions. As mentioned earlier, these visions were restricted and shaped by the financial limits he was allowed to manoeuvre within. As to the other small bank, L2, the power to implement the main decision maker's vision came from his authority and banking experience rather than his technical expertise, and his decisions were constrained by financial considerations. In both banks, these visions and decisions were subject to political challenge by other stakeholders, though to varying extents.

In all of the local banks, the board of directors participated in evaluating the IT strategies that marked a turnaround point for the banks and which needed substantial financial investment. The process of IT strategy approval within the board of directors was subject to a struggle between the directors, on one hand, and the banks'

management, on the other. In one case study, a political struggle amongst the board members occurred between those who represented the bank's interests and those who represented other entities' interests as well.

Strategy formation within the foreign banks:

The foreign banks' strategy formation process may be contrasted to that of the local banks. These banks have high isomorphism in the way they handle their IT strategies. These strategies could be described as imposed strategies, centrally developed away from Bahrain, having a global nature rationalised by their desire to achieve an economy of scale and control over the cost of IT developments, with a trickle down effect, and are less sensitive to local needs. The foreign banks' branches operating in Bahrain are remote from the process of strategy formulation. Nonetheless, these branches were in a political struggle with their head offices or regional offices to achieve a better deal in terms of getting more IT resources in Bahrain. The local IT needs are negotiated within committees involving the top management and IT representatives and they are done through an informal negotiation process.

The strategy formation process in one of the foreign banks followed the pattern described above. However, it was formulated in Bahrain as this bank's headquarters office was located in Bahrain. The bank differed from the conventional banks in its operations. The development of its core banking system provided an example of systems that are developed as a result of the interaction of the different forms of expertise within the bank. The interaction between these forms enabled the amalgamation of the technical knowledge of the IT department with the knowledge about the specialised banking operations (Islamic banking operations), which was new and different as compared to the other conventional banks' operations. Such interaction was a source of the successful creation of the bank's systems. This argument is parallel to the management of expertise approach of Fincham et al.'s (1994), which emphasises the importance of the involvement of different forms of expertise in the development of complex systems.

Development of the strategic vision:

The strategic vision for the banks was not restricted to the formal approaches that some of these banks adopted. It was influenced by tacit knowledge generated from how these banks formulated and deployed expertise. The following are the sources of expertise that generated the tacit knowledge required for the development of a strategic vision:

- relationship with the vendors - hardware and software;

- 'commodified technological artefacts';

- formal and informal relationships with the consultants;

- new recruits;

- grooming the skills of top management;

- accumulation of expertise from the implementation of previous strategies and innovations; and

- formal and informal participation in events such as exhibitions, seminars, and conferences.

Scholars like Granovetter (1985, 1992) stressed the importance of social networks in influencing institutions' behaviour through, for example, promoting trust and discouraging malfeasance. Others, like Fincham et al. (1994), Swan (1996), Scarbrough (1997), highlighted the importance of social networks as an important source of knowledge that affects strategy development behaviour.

In line with the above scholars' arguments, my case studies revealed that the relationships, formal or informal, that the Bahraini banks maintained with other institutions were important sources of the banks' expertise.

The first of these forms of relationships was with the vendors. This form of relationship was a source of knowledge about changes within the technological environment and a source of education to the IT strategists. This source of expertise was important for the conventional banks (as opposed to one of the Islamic banks) that depended on adopting "commodified technological artefacts - equipment and software packages" as a source of "condensed" expertise as Fincham et al. (1994) described. More about the banks' relationship with their vendors will be discussed in a separate section.

Another relationship, was informal in nature with other role model banks outside Bahrain. One of the case studies modelled itself after these banks. These banks were perceived as successful banks that had pioneered in utilising IT.

The relationship with the consultants was a main source of expertise for the 'formal-rational' banks. Some of the 'formal rational' banks ended their relationship with the consultants once they had acquired the skills for formalising their strategic plans. The banks also gained knowledge through informal contacts with the consultants, who approached these banks occasionally to provide seminars to market some of their services.

New recruits were another source of expertise that shaped the banks' strategic vision. In those banks where IT strategies were ad hoc and entrepreneurial in nature, the new recruits' background and past experience were the main sources that shaped their strategic vision.

Expertise was also generated through grooming the skills of old management. Within the 'formal-rational' banks, it took the form of enabling the management to acquire degrees such as the MBAs. This approach to grooming was influenced by the consultants.

In two banks, L4 and F3, more expertise was generated from the implementation of previous strategies and innovations which influenced 'cognition' of future strategic vision thereafter.

The strategic vision within the formal banks, L3, L4, and L5, evolved within the systems steering committees in which different expert groups participated. The power in these groups was uneven, with more power maintained by the top management. However, the IT managers' 'advisory role' was essential for informing the top management of the possible strategic choices. As to the ad hoc banks, the strategic vision was embraced by the 'entrepreneur' or the sole product champion running the strategic scene. In contrast to the local banks, the foreign banks' strategic vision was developed away from Bahrain. However, this vision was altered in some cases due to the political struggle of these banks with their groups.

Relationship with the vendors:

The evolution of the banks' IT initiatives could not be separated from the context of their relationship with their vendors. All of the banks, with the exception of one, maintained a long relationship with key vendors.

The vendors perceived their role as follows:

- to educate / increase the clients' IT literacy, based on the technology the vendors offer; and

- to understand their clients' requirements.

In order to achieve the above objectives, the vendors targeted the key personnel within the banks. It was revealed that the vendor played a proactive role through targeting the top management, the technologists, and the users in order to shape their vision and hence influence their decisions towards their systems.

The intimate relationship with the vendors had the following effects on these banks:

- to inform the banks' IT initiatives / future strategies;

- to direct the development of infrastructure; and in some cases

- to participate in a grass roots (bottom up) evaluation of the systems.

The relationship with the vendor could be viewed as an institutionalised practice through which these local banks acquired expertise to buffer the perceived risk of failure associated with the adoption of IT, and cope with the uncertainty associated with changes within the technological environment.

The relationship between some of the key local banks and the vendors was established, I infer, due to the presence of stakeholder interest between the banks' and their vendors. on one hand, and on the other, the relationship and experience of the IT strategists with some of these vendors.

The foreign banks were isomorphic in their relationship with their vendors. The relationship was maintained at headquarters level. IBM claimed that they mutually exchanged views about their future plans with their key clients at the headquarters level. Some of the foreign banks rationalised their relationship with their vendors as a means to enable a global implementation of their strategies. One of the smaller foreign banks perceived its relationship with the vendor as strategic and serving the following purposes:

- informing the bank of any changes in the technological environment;

- enabling the bank to avoid the cost of major internal developments of systems;

- providing expertise / consultancy to the bank; and

- reducing the risk of failure associated with large scale IT projects.

Not all of the banks perceived their relationship with their vendors as strategic. The other face of the 'bank - vendor' relationship was that in which this relationship was perceived as a threat, as was observed in one case study. In this case, none of the vendors was able to offer any application systems to cater for the specialised needs of this bank. With the absence of this kind of support, or source of expertise, the bank perceived depending on a particular vendor's hardware as a potential threat to its business strategies. The bank opted for an open system strategy instead. This bank broke the institutionalised norm. No other banks followed the pattern of this bank with the exception of L1. Both this bank and L1 were not perceived as a benchmark banks in the industry, since they were comparative newcomers. One of them operated differently from the conventional banks, and the other was discredited due to its previous financial problems and its small size in the market. According to Morris (1996), banks tend to be disinclined to model themselves after organisations which are perceived as less successful in the industry.

Though the relationship with the vendors facilitated the acquisition of knowledge that these banks needed in order to form their strategic vision, this knowledge was not neutral. Each of the vendors influenced his clients to acquire the solutions that the vendor offered. This type of behaviour prevented banks that had a strong tie with their vendors from considering other options that might have been more efficient, for example, the adoption of downsized and open infrastructure systems. Swan (1996, p. 137) reported similar findings about the bias of knowledge disseminated by these networks.

Drivers to IT initiatives:

The analogy of the 'lemmings' was used by one of the banks' general managers to describe the behaviour of the banking community. The banking community exhibited a high isomorphism in its behaviour. This isomorphism is one of the characteristics of highly institutionalised communities in which the members are under pressure to exhibit

homogeneity through adopting the prevailing norms in order to secure stability and survival (DiMaggio and Powell, 1991). When it came to the approaches to developing IT strategies within the local banks, the three major local banks were influenced by each others' initiatives and moved to adopt 'a formal rational approach' to their IT strategy formation. The adoption of the formal-rational approaches to strategy formation was driven by psychological drivers emerging from the banks' frustration and desire to change their previous image, legitimacy drivers seeking support and approval from the central bank and other stakeholders through adopting institutionalised rational norms, and economic and efficiency drivers opened up by changes in the external environment. My argument is consistent with Abrahamson's (1996) argument, which contended that economic and technical forces, sociopsychological forces, and institutional forces compete in shaping the demand for management fashions. Moreover, organisations adopt these fashions not merely due to sociopsychological forces but also to learn new techniques, which would enable them to respond to the organisational gap open by changes in economic and technical environments.

The foreign banks were also isomorphic in their approach to their strategy formation. All of them had an imposed strategies with a 'trickle-down' effect.

There was a consensus amongst most of the banks that they were doing more or less the same thing with regard to their IT initiatives, though they were each operating independently. Some of these banks argued that they had to follow the 'vogue' and provide what the others were offering, despite their scepticism about its reward to their profitability. By doing so, I argue, they tended to buffer any criticism of abnormality and deficiency before the stakeholders.

The banks also provided rational accounts as a driver to their initiatives. For example, Local 5, one of the big banks, argued that their IT initiatives and strategies were mainly driven by the competition and this was rational strategic choice of theirs. In addition to the above, there was reference to operational needs and infrastructure needs as drivers to some of the banks' initiatives.

Cultural context:

I argue in this section that decisions and strategies related to the adoption of IT are not independent of cultural, historical, organisational, and political contexts. These factors compete with rational calculations of economic benefits in shaping an organisation's strategic behaviour.

Knights and Morgan (1995) provided a genealogical analysis of strategic discourse. They argued that ".. a genealogy would never claim to have exhausted what determines a particular discourse and practice. It simply seeks to uncover that without which such discourse might never have arisen" (p. 198). Though my thesis does not focus on a genealogical analysis in the manner that Knights and Morgan adopted, I have, however, uncovered some key historical factors which I claim were influential in the incursion of the strategic discourse. These historical events played a role in creating the culture of the banks and in encouraging or discouraging these banks from pursuing a given approach to their IT development.

In the culture chapter, I classified the banks into different cultures by using metaphors. Each of these metaphors embraced a different set of attitudes and beliefs that had affected the banks' adoption behaviour. Moreover, the changes that these cultures experienced had an effect on the ability of these banks to adopt new approaches to their IT initiatives. The following metaphors describe the banks' cultures.

- The 'catholic marriage' culture and the 'daring banks' culture experienced revolutionary/radical changes. The changes were at the conceptual level of thinking as well as the concrete level. To use a different vocabulary, the banks experienced a 're-thinking' and a 're-doing' in association with these revolutionary changes. These changes enhanced these banks' ability to absorb the new knowledge required to adopt new technologies. The IT strategic thrust within these banks was made within systems steering committees which embraced different forms of expertise.

- The 'play it safe' culture, which mainly represented L1, experienced a radical change within many aspects of this bank's culture. The new recruits to this bank

brought with them the knowledge required to 're-think' and 're-do' their approach to IT, and therefore, enabled the bank to absorb new knowledge that led the bank's later IT initiatives. However, the bank's approach to IT strategies was not free from its past legacy and inherited culture that was conservative concerning spending on IT.

- The 'demanding mistress' culture experienced less cultural change and higher inertia than the other cultures. This culture was slower to absorb the new technologies than the other cultures.

- The 'others do the thinking and the doing' culture was subject to the changes coming from abroad, rather than the changes from within the foreign banks' branches in Bahrain.

Political power and IT strategies / initiatives:

The development of IT initiatives / strategies was not isolated from political power and struggle within these banks. Within the local banks, IT was perceived as the prerogative of the top management, who had supremacy in defining and approving the banks' strategic thrust, including that of IT, although the participation of the IT managers was perceived as essential for providing advice lacked by top management about the information technologies. The strategic role that IT acquired, enabled the IT experts to enter the strategic decision arena that they had been long excluded from. Moreover, it enabled them to struggle for a change in their status from reactive 'order takers' to proactive change enablers.

As for the foreign banks, the IT strategies / initiatives were perceived as being the prerogative of headquarters or the regional offices. However, the local branches of these banks were in a political struggle to secure their local IT needs from headquarters.

Cultural Gap:

The ingredients of the cultural gap between the top management, and the technologists may be summarised in the following points:

- lack of congruence between the two parties;

- lack of top management support;

- lack of top management technical sophistication;

- failure of the technologists to deliver their views;

- lack of top management mandate to establish the required communication lines with the users;

- lack of user representation within the system steering committees;

- lack of clear vision about who is responsible for IT-based products within the bank, the technologists or the bankers; and

- dispute about the role that the IT manager should play - a reactive 'order taker' who produces what the bankers want, or a proactive role able to influence strategies and participate in the needed change.

As for the foreign banks, the cultural gap existed in the form of tension and political struggle between the local branches and headquarters. Headquarters were less aware of and responsive to local needs. The imposed strategies created dissatisfaction in some cases. Some of the systems were perceived as a bane to the banks rather than a support. Moreover, because these systems were global in nature, the informants argued that they were designed in a less user friendly manner, and in some cases fell short of meeting the users' needs due to the pressure from the headquarters to cut costs. The political

struggle in the foreign banks was among the users, the technologists and the groups' management. The mismatch in the perception of each was a source of the cultural gap within these banks.

Another form of cultural gap exists between the banks on one hand and the regulatory body on the other due to the different views and perceptions that these two parties may have.

Inertia:

The banking industry was characterised by a number of factors which created inertia. These factors delayed the adoption pace within the industry. The factors contributing to the inertia could be classified as internal factors within the banks and external factors that existed within the external environment.

As to the latter, the regulations within the sector were identified as external factors which delayed the banks from redesigning their business networks, though the very same factor, the regulations, preserved the industry's stability and safeguarded it from any disastrous events.

The internal factors were related to the banks' culture. The 'demanding mistress' culture, the 'others do the thinking and the doing', and the 'play it safe' cultures exhibited relatively higher inertia than the 'catholic marriage' and the 'daring banks' cultures. The high sunk cost in knowledge and investment that these banks experienced represented a source of this inertia, inhibiting these banks from coping with the pace of change in technology. The majority of the banks reported that they had an outdated infrastructure which restricted their business strategies. The inertia within these banks preserved these 'Jurassic' technologies for long periods of time. It was the 'lemming' or the isomorphism driver that forced these banks to revitalise their systems at later dates rather than merely the efficiency driver.

Other factors caused inertia, such as the lack of support from top management, board of directors, and groups; lack of awareness about the banks' local IT needs and business implications amongst these groups of decision makers, the banks' small size and financial strength; the dependence of banks on certain channels for acquiring 'knowledge' about their strategic vision; and a strong relationship with their vendors which prevented the banks from moving outside the boundaries that their vendors imposed.

Managerial implications:

This section lays out the managerial implications of the thesis.

- IT strategies and initiatives are influenced by an amalgam of social, institutional, micro-political and economic factors. The strategists need to manage the issue of strategy within this amalgam of forces, recognising the competing values, powers, objectives, and institutional factors.

- The case studies' findings indicate that different forms of expertise played a role in influencing the strategic vision of these banks. An important source of expertise emerged from the strategists' social networks with the vendors, the consultants, and the role model banks. Another source of expertise emerged from the new recruits and the grooming programs that the existing managers went through. The banks need to cultivate these sources of expertise. The strategists should possess the required social skills to cultivate their relations with the social networks and exploit the tacit knowledge derived from these networks. However, the strategists should also be alert to the possible bias derived from each of these forms of expertise.

- The majority of the banks migrated to new IT platforms to exploit IT benefits that were not feasible with the old infrastructure. The vitality of the banks' infrastructure was critical for exploiting these benefits. Equally important, the management needs

.

to consider changes in the organisation's conceptual levels and foster the desired values which lead to a cultural change which is consistent with the strategic and systems change.

- The 'daring banks' and the 'catholic marriage' cultures seemed more successful in their exploitation of IT. Other banks need to consider adopting the elements in these banks' cultures that led to their success. The following are some recommendations:

  - ensure top management support;

  - encourage the participation of the different stakeholders in shaping the banks' strategic vision. The capability of the strategists to exploit the intra-organisational social networks is crucial to their success in creating a strategic vision;

  - ensure that any strategic changes reach the core beliefs of the organisations;

  - exploit the different means of learning;

  - enrich the banks' top management with new recruits with varied experiences;

  - train the existing top management and groom their skills to improve the banks' strategic vision;

  - establish competent IT departments which have sufficient resources;

  - bolster the financial strength. This was amongst the factors that made the 'daring banks' and the 'catholic marriage' cultures more able to exploit and experiment with new technologies and hence institutionalise new outputs within the industry. The smaller banks need to consider the possibility of merging to enhance their ability to adopt more radical solutions.

- The IT managers' role needs to change from a reactive 'order taker' to a proactive role. The aim is to enable the IT managers to engage in a process that brings about business change rather than merely facilitates the activities of others.

Implication for theory:

The thesis argues that there is a need for a comprehensive view for understanding the up-take of information systems and technology (IS/IT) as they expand beyond the mere technical and functional domains to span other socio-political, cultural, and institutional domains.

Based on the above argument, I claim that the rational and functional frameworks developed to deal with the development of IS/IT strategies are limited in their scope and effect, as they fail to consider the wider perspectives of the IS/IT domain.

There is a need for developing a more sophisticated and comprehensive framework, which is capable of capturing the social and technical dimensions of IS/IT. This comprehensive framework should aid the managers in exploring the means of defining the content of their IS/IT strategies, and how that content is transformed to systems aligned to the organisation's needs. There is a need to deploy more flexible interpretative measures, which are based on participative techniques, that are not static but dynamic and are performed on a continuous basis. These interpretative techniques are needed to capture the tacit knowledge and expertise from within the organisation or across the organisations to develop the needed strategic vision. Moreover, the comprehensive framework needs to enable managers to implement their IS/IT strategies successfully through exploring different means of solving social and organisational problems associated with the IS domain. Interpretative techniques may prove to be more appropriate for answering the 'what' question determining the content of IS strategies. The information derived from these techniques may then be used with more

rational measures, for example, to determine how the systems need to be designed, and to solve the technical problems associated with the development of the systems.

The bottom line is that there is a need for a complementary approach which considers social theories as well as rational theories, as both of these fields pertain to the IS/IT domain. A step towards developing an integrated framework that incorporates the interpretivist as well as functionalist methods has been reported by Clarke and Lehaney (1997).

Suggestions for further research:

This thesis aims to provide an insight into the process of IT adoption by going beyond the narrow rational stream of analysis. I claim that socio-cultural, institutional and economic forces represent an amalgam which influences the adoption process. Further research is needed to unveil the effects of these contexts on the processes of adoption and strategy formation.

The process of developing an IT strategic vision needs to be scrutinised to understand the different roles played by the different forms of expertise in this process and to understand how it influenced and was influenced by innovations.

In this study, the relationship with the vendors represented one of the sources of expertise that many of the banks depended on for coping with demands and changes within the technology arena. It was not possible, however, to conduct an in-depth inquiry within the foreign banks about the nature of their relationship with the vendors and the influence of this relationship on the development of the technologies and strategies between the vendors and the banks. There were indications from the IBM informer that there was mutual influence on the development of technology and strategies, as a result of this relationship. It would be worth conducting a research study investigating the nature of the relationship between the global foreign banks and their

vendors, and the influence of this relationship on their future development and strategies.

Another suggestion for inquiring about the nature of the banks'- vendors relationships is to conduct a longitudinal research study inquiring about the implication of this relationship and the changes that may occur in these 'intimate' relationships as the adoption of open systems becomes more institutionalised within the international banking industry.

It is also worth considering extending the analysis to representatives of different forms of financial institutions such as offshore banks and insurance companies to understand the nature of IT strategy formation, the level of its maturity, the factors that influence its incursion, and the institutional norms that affect it within these institutions.

Bibliography

.

Abrahamson, E (1996): Management Fashion. Academy of Management Review 21, 254-285.

Andreu, R; Ricart, J; Valor, J (1992): Information Systems Strategic Planning: A Source of Competitive Advantage. NCC Blackwell, England.

Applegate, L; McFarlan, F; McKenney, J (1996): Corporate Information Systems Management: Text and Cases. Irwin, USA.

Arab Communications (1993): Bahrain Business Directory, Bahrain.

Bate, P (1994): Strategies for Cultural Change. Butterworth Heinemann. Oxford.

Benjamin, R; Rockart, J; Scott Morton, M (1984): Information technology: a strategic opportunity. Sloan Management Review, Spring, cited in Earl, M. (1989), Management strategies for information technology, Prentice Hall.

Berry, M (1993): The strategic Management of Technology as a Source of Competitive Advantage in Small High Tech Rirms. Ph.D. Dissertation, University of Strathclyde - Department of Marketing.

BMA (1994): Bahrain an International Financial Centre. Bahrain Monetary Agency, Bahrain

Boddy, D; Buchanan, D (1992): Take the lead: Interpersonal Skills for Project Managers. Prentice Hall, 1992.

Boddy, D; Gunson, N (1996): Organisations in the Network Age. Routledge, London.

Broderick, R; Boudreau, J (1992): Human Resource Management, Information Technology and the Competitive Edge". Academy of Management Executive 6, 7-17.

Bryman, A (1988): Quantity and Quality in Social Research. London: Unwin Hyman, Cited in Silverman, D. (1993), Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction, Sage.

Bryson, C; Currie, W (1995): IT Strategy: Formal Rational Orthodoxy or Contingent Adhocracy? Omega, The International Journal of Management Science 23, 677-689.

Bseisu, A (1984): Monetary Organisation in Bahrain. Unpublished Report.

Burgelman,R; Rosenbloom,R (1997): Technology Strategy: An Evolutionary Process Perspective. In: Managing Strategic Innovation and Change. (Eds: Tushman,M; Anderson,P) Oxford University Press, New York, 273-286.

Burns, T (1969): On the Plurality of Social Systems. In T. Burns (ed.) Industrial Man (Harmondsworth: Penguin) Cited in Fincahm, R and Roslender, R. (1995), Information Technology and the Strategy Process: The UK Financial Services Industry", Critical Perspective on Accounting, Vol 6, pp. 7-26.

Capital Intelligence (1994): Bahrain National Banking Environment. Limassol, P.O. Box 3585, 6-8 Paphos Road, Limassol, Cyprus.

Central Statistics Organisation (1995): Statistical Abstract - Dec. State of Bahrain, Directorate of Statistics.

Child, J; Smith, C (1987): The context and process of organisational transformations - Cadbury Limited in its sector: Journal of Management Studies 24, 265-293.

Choi, W; Gannon, P (1996): Technology and Regulations Enable Commercial Banking mergers and Acquisitions.
http://equity.wharton.upenn.edu/~patric06/mgmt721/finalpaper/paper.htm, pp. 1-22.

Chung, L (1991): Strategic Use of Information Systems Technology (ITS) by Saving Institutions: An Empirical Investigation. The University of Nebraska-Lincoln.

Clark, J (1995): Managing innovation and change. Sage, London.

Clark, P; Staunton, N (1989): Innovation in Technology and Organisation. Routledge, London.

Clarke, S; Lehaney, B (1997): Information Systems Strategic Planning: A Model For Implementation in Changing Organizations. Systems Research and Behavioural Science 14, 129-136.

Cunningham, A (1989): Gulf Baning and Finance: Facing up to Change. Meed, Nov.

Currie, W (1995): Management strategy for IT: An international perspective. Pitman Publishing, England.

Denzin, N; Lincoln, Y (Eds.) (1994): Handbook of Qualitative Research. Sage Publications, Thousand Oaks, London.

Dey, I (1993): Qualitative Data Analysis. Routledge, London and New York.

DiMaggio, P; Powell, W (1991): The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. In: The New Institutionalism in Organizational Analysis. (Eds: Powell,W; DiMaggio,P) The University of Chicago Press, Chicago and London, 63-82.

Doyle, J (1991): Problems with strategic information systems frameworks. European Journal of Information Systems 1, 273-280.

Duncan, P (February, 1997): The Impact of IT on Small Legal Practices in Scotland. Work in Progress, The Journal of Information, Law and Technology (JILT). <http://elj.warwick.ac.uk/jilt/wip/97dunc/>.

Earl, M (Ed.) (1988): Information Management: The Strategic Dimension. Clarendon Press, Oxford.

Earl, M (1989): Management Strategies for Information Technology. Prentice Hall, Hertfordshire.

Earl, M (1993): Experiences in Strategic Information Systems Planning. MIS Quarterly March, xi, 1-24.

Earl, M (Ed.) (1996): Information Management: The Organisation Dimension. Oxford University Press, Oxford.

Easterby-Smith, M; Thorpe, R; Lowe, A (1991): Management Research: An Introduction. Sage, London.

Economic Bulletin (1992): Economic Research of the GCC Countries, VII.

ESCWA (1987): Arab Banks. United Nations.

Fincham, R; Fleck, J; Procter, R; Scarbrough, H; Tierney, M; Williams, R (1994): Expertise and innovation. Clarendon Press, Oxford.

Fincham, R; Roslender, R (1995): Information technology and the strategy process: the UK financial services industry. Critical perspectives on Accounting 6, 7-26.

Fiol, C (1996): Squeezing hard doesn't always work: continuing the search for consistency in innovation research. Academy of Management Reveiw 21, 1012-1021.

Gable, G (1994): Integrating case study and survey research methods: an example in information systems. Eur. J. Inf. Systs 3, 112-126.

Granovetter, M (1985): Economic Action and Social Structure: The problem of Embeddedness. American Journal of Sociology 91, 481-510.

Granovetter, M (1992): Economic Institutions as Social Constructions: A Framework Analysis. Acta Sociologica 35, 3-11.

Hammersley, M (1990): Reading Ethongraphic Research: A Critical Guide. London: Longmans, Cited in Silverman, D. (1993), Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction, Sage.

Hammersley, M (1992): What's Wrong with Ethnography: Methodological Explorations. London: Routledge, cited in Silverman, D. (1993), Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction, Sage.

Hannan, M; Freeman, J (1989): Organizational Ecology. Harvered Business Press, Cambridge, Mssachusetts, London, England.

Hart, S (1987): An Empirical Investigation of the Product Elimination Decision-Making Process in British Manufacturing Industry. Ph.D. Dissertation, The University of Strathclyde.

Howells, J; Hine, J (Eds.) (1993): Innovative Banking: Competition and the Management of a New Networks Technology. Routledge, London.

Huberman, A; Miles, M (1994): Data management and analysis methods. In: Handbook of qualitative research. (Eds: Denzin,N; Lincoln,Y) Sage, England, 428-444.

Itami, H; Numagami, T (1992): Dynamic interaction between strategy and technology. Strategic Management Journal 13, 119-135.

Ives, B; Learmonth, G (1984): The information system as competitive weapon. Communication of the ACM, December .

Johnson, G (1989): Rethinking Incrementalism. In: Readings in strategic management. 1993 ed. (Eds: Asch,D; Bowman,C) Macmillan and the Open University, London, 37-56.

Kelle, U (1995): Introduction: An Overview of Computer-aided Methods in Qualitative Research. In: Computer-Aided Qualitative Data Analysis: Theory, Methods, and Practice. (Ed: Kelle,U) Sage, London, 1-17.

Kendall, J; Kendall, K (1994): Metaphors and their meaning for information systems development. Eur. J. Inf. Systs 3, 37-47.

King, N (1994): The qualitative Research Interview. In: Qualitative Methods in Organisational Research. (Eds: Cassell,C; Symon,G) Sage, London, 14-36.

King, W; Grover, V; Hufnagel,E (1989): Using Information and Information technology for Sustainable Competitive Advantage: Some Empirical Evidence". Information and Management (Netherlands) 17, 87-93.

Knights, D; Morgan, G (1990): The Concept of Strategy in Sociology: A Note of Dissent. Sociology, Vol. 24, pp. 475-483, cited in Fincham. R. and Roslender, R. (1995), "Information Technology and the Strategy Process: The UK Financial Services Industry", Critical Perspectives on Accounting, Vol. 6, pp. 7-26.

Knights, D; Morgan, G (1991): Corporate Strategy, Organisations, and Subjectivity: A Critique. Organisation Studies 12, 251-273.

Knights, D; Morgan, G (1995): Strategy under the microscope: strategic management and IT in financial services. Journal of Management Studies 32, 191-214.

Maykut, P; Morehouse, R (1994): Beginning Qualitative Research A Philosophic and Practical Guide. The Falmer Press, London.

McFarlan, F W (1984): Information technology changes the way you compete. Harvard Business Review. May-June.

McFarlan, F W; McKenney, J (1983): Corporate Information Systems Management: The Issues Facing Senior Executives. Dow Jones Irwin.

Meyer, J; Rowan, B (1977): Institutionalised organisations: Formal structure as myth and ceremony. American Journal of Sociology, 83:340-63, Cited in Powell, W. and DiMaggio, P. (1991), The New Institutionalism in Organisational Analysis, The University of Chicago Press.

Miles, M (1979): Qualitative data as an attractive nuisance: The problem of analysis. Administrative Science Quarterly 24, 590-601.

Miles, M; Huberman, A (1994): An Expanded Sourcebook: Qualitative Data Analysis. Sage, London.

Mintz, B; Schwartz, M (1985): The Power Structure of American Business. University of Chicago Press, Chicago, London.

Mintzberg, H (1994): Rethinking Strategic Planning, Part 1: Pitfalls and Fallacies. Long Range Planning 27, 12-21.

Mintzerg, H (1994): The rise and fall of strategic planing. Prentice Hall, London.

Mintzberg, H; Waters, J (1989): Of Strategies, Delibrate and Emergent. In: Readings in Strategic Management. 1993 ed. (Eds: Asch,D; Bowman,C) Macmillan Press, Hong Kong, 4-19.

Mintzberg, H; Westley, F (1992): Cycles of Organisational Change. Strategic Management Journal 13, 39-59.

Morgan, G (1986): Images of Organisation. Sage, Beverly Hills, California. Cited in Kendall, J; Kendall, K (1994): Metaphors and their meaning for information systems development. Eur. J. Inf. Systs 3, 37-47.

Morris, T; Westbrook, R (1996): Technical Innovation and Competitive Advantage in Retail Financial Services: A case Study of Change and Industry Response. British Journal of Management 7, 45-61.

Oliver, C (1991): Strategic Responses to Institutional Processes. Academy of Management Review 16, 145-179. Cited in Scott, Richard W (1995: p. 128): Institutions and Organisations. Sage, Thousand Oak, London New Delhi.

Parsons, G (1983): Information technology: a new competitive weapon. Sloan Management Review, Fall.

Patton, M (1980): Qualitative Evaluation Methods. Sage Publication, Cited in Hart,S. (1987), An Empirical Investigation of The Product Elimination Decision-Making Process in British Manufacturing Industry, The University of Strathclyde, UK.

Peffers, K (1991): Information Technology Impact on Performance: An Investigation of Investments in ATMs. Ph.D. Dissertation, Purdue University, USA.

Pettigrew, A (1987): The Management of Strategic Change. Oxford: Blackwell, Cited in Fincham,R. and Rolsender, R. (1995), Information Technology and the Strategy

Process: The UK Financial Services Industry", Critical Perspective on accounting, Vol. 6, 7-26.

Pidgeon, N; Henwood, K (1996): Grounded theory:Practical implementation. In: Handbook of Qualitative Research Methods. (Ed: Richardson,J) The British Psychological Society, Leicester, 86-101.

Porter, M; Millar, V (1985): How information gives you competitive advantage. Harvard Business Review July-August, 149-160. Cited in Currie, W (1995: p. 26): Management strategy for IT: An international perspective. Pitman Publishing, England.

Powell, Walter W; Dimaggio, Paul J (Eds.) (1991): The New Institutionalism in Organisational Analysis. The University of Chicago Press, Chicago and London.

Quinn, J (1989): Managing Strategic Change. In: Readings in Strategic Management. 1993 ed. (Eds: Asch, D; Bowman, C) Macmillan in addition to the Open University, Hong Kong, 20-36.

Richards, T; Richards, L (1994): Using Computers in Qualitative Research. In: Handbook of Qualitative Research. (Eds: Denzin,N; Lincoln,Y) Sage, London, 445-462.

Richards,L; Richards,T (1995): Computers and Qualitative Theory Building. In: Computer-Aided Qualitative Data Analysis. (Ed: Kelle,U) Sage. London, 62-68.

Runge, D; Earl, M (1988): Gaining Competitive Advantage from Telecommunications. In: Information Management: The Strategic Dimension. (Ed: Earl,M) Clarendon Press, Oxford, 125-145.

Scarbrough, H (1997): Making the matrix matter: Strategic information systems in financial services. Journal of Management Studies 34:2 March, 171-190.

Scott, W (1991): Unpacking Institutional Arguments. In: The New Institutionalism in Organisational Analysis. (Eds: Powell,W; DiMaggio,P) The University of Chicago Press, Chicago and London, 164-182.

Scott, R W (1995): Institutions and Organisations. Sage, Thousand Oak, London New Delhi.

Scott, W; Meyer,J (1991): The Organisation of Societal Sectors: Propositions and Early Evidence. In: The New Institutionalism in Organisational Analysis. (Eds: Powell,W; Dimaggio,P) The University of Chicago Press, Chicago and London, 108-140.

Scott Morton, M (Ed.) (1991): The Corporation of The 1990s. Oxford University Press, New Yord, Oxford.

Seidel, J; Kelle, U (1995): Different Functions of Coding in the Analysis of Textual Data. In: Computer-Aided Qualitative Data Analysis. (Ed: Kelle,U) Sage, London, 54-68.

Sharoqi, M (1993): The Development of Bahrain Economy: 1971 - 1989 (Arabic publication). BMA, Bahrain.

Shearman, C; Burrell, G (1987): The structures of industrial development. Journal of Management Studies 24, 325-345. Cited in Fincham, R; Fleck, J; Procter, R; Scarbrough, H; Tierney, M; Williams, R (1994: p. 105): Expertise and innovation. Clarendon Press, Oxford.

Silverman, D (1993): Interpreting Qualitative Data: Methods for Analysing Talk, Text, and Interaction. Sage Publication, London.

Singh, S (1996): Money, Marriage and the Computer. http://www.qsr.com.au/resources/supria-singh.html.

Stake, R (1994): Case Studies. In: Handbook of Qualitative Research. (Eds: Denzin,N; Lincoln,Y) Sage, London, 236-246.

Stake, R (1995): The Art of Case Study Research. Sage, London.

Statistical Abstract (1995). Central Statistics Organization, Bahrain.

Swan, J (1996): Professional associations and the management of expertise. In: Management, Work and Organisations: The Management of Expertise. (Ed: Scarbrough,H) Macmillan Business, London, 123-149.

Venkatraman, N (1991): IT-induced business reconfiguration. In: The Corporation of the 1990s: Information Technology and Organisational Transformation. (Ed: Scott Morton,M) Oxford University Press, New York, Oxford, 122-158.

Van Maanen, J (1989): The fact of fiction in organizational ethnography. Administrative Science Quarterly 24, 539-550.

Venkatraman, N (1994): IT-enabled business transformation: From automation to business scope redefinition. Sloan Management Review Winter, 73-86.

Walsham, G (1993): Interpreting information systems in organisations. John Wiley & Sons, England.

Walsham,G (1995): Interpretive case studies in IS research: nature and method. Eur. J. Inf. Systs 4, 74-81.

Weaver, R (1967): A Rhetoric and Handbook. Holt, Rinehart and Winston, New York. Cited in Kendall, J; Kendall, K (1994): Metaphors and their meaning for information systems development. Eur. J. Inf. Systs 3, 37-47.

.

Weill, P (1990): Strategic Investment in Information Technology: an Empirical Study. Information Age 12, 141-147.

Westall, O (1996): British business history and the culture of business. In: Business history and business culture. (Eds: Godley,A; Westall,O) Manchester University Press, Manchester and New York, 21-43.

Wiseman, C (1985): Strategy and computers. Dow-Jones Irwin, .

Yin, R (1994): Case Study Research: Designs and Methods. Sage Publications, Thousand Oaks.

Zahir, A (1992): Strategic Implications of Information Technology. PhD. Thesis, Massacheusettes Inst. of Technology.

Appendix

- Examples of the question lists used to guide the interviews.

- Examples of the meta-matrices used for data reduction.

- Types of Islamic financing vehicles.

Topics forming the basis for discussion with an SBU manager in L5

Informant background:
* Work experience   * Education
* Position/main responsibilities   * Nationality
* Age

- Factors affecting the competitiveness of the Bahraini banks.

- Role of IT in this division/department.

      * Important IT systems.
        What and Why.

      * Mechanism through which IT requirements are
      defined/initiated

      * Reasons for embarking on these systems.

- Ways in which the bank is different in using IT, if it is so, from its main competitors.

- Extent to which the bank takes account of what other banks do.

- Impetus/drivers of IT strategies.

- Key players that formulate/direct (or aid in formulating/directing) the bank's

      a: business strategies.
      b: IT strategies.
            any external Key players, e.g. consultants, IT suppliers.

- Relationship between IT strategies and business strategies.

- Any change in the relationship between the bank and the following entities based on using IT collectively:
      * Customers   - Describe the nature of relationship
      * Retailers   - Nature of relationship
      * Other banks - Nature of relationship
      * Other key players in the market?

- Means through which business units and IT unit personnel achieve a mutual understanding of the role of IT.

- Main   a - enablers
             b - inhibitors of using IT strategically

Questions forming the bases of discussion with the IT manager:

1- Background about the IT manger:
   - Work experience
   - Education
   - Age
   - Nationality

2- Provide a historical background about the main developments of information technology (IT) within the bank.

   Please mention any important dates, systems, and reasons for acquiring these
   systems.

3- What were the competitors doing during that period?

4- What role, if any, did the suppliers play in the process of adopting the mentioned IT systems?

5- What is your vision about where the bank should be heading with regard to the type of IT and why?

6- What are the major contributions of IT to the bank?

   * What role does IT play in your bank?

7- How is this bank different from other banks in Bahrain in exploiting IT? If it is different, How is it different?

8- Is there any collaboration between the bank and any other banks based on joint IT initiatives?

   * If yes, what are these joint projects?
   * What are the expected benefits of these projects?
   * If no, could you define any major joint initiative(s) that may have potential benefits to your bank?
   * Why were these joint projects not implemented?

9- To what extent, in your opinion, do you think that the Bahraini banks are willing and able to collaborate among themselves based on IT projects?
   * What are the barriers that may stop them from achieving this type of collaboration?

10- What are the market segment(s) that IT serve most?
   What are these IT systems?
   When and why these IT systems were introduced?
   What are the market segment that IT serve least?

11- Discuss the processes/procedures (formal or informal), if any, that the bank go through in formulating its IT strategies.

* Who Participate in the formulation of these strategies?

* Are there any committees either within the IT department or in which the IT department is involved?

* What are the purposes of these committees?

12- What are the main drivers of IT initiatives?

13- Through what mechanism does the IT department define the bank's business needs?

14- Through what means does the bank detect any changes in the external environment?

15- For an IT project such as the ATMs:
* When the project was proposed?
* Compared to the other banks, what was the bank's rank at the time the of ATM adoption?
* Why it was proposed at that particular time?
* Who proposed this system?
* Discuss how the top management perceived the
  a- advantage
  b- disadvantage of the system

* Discuss how the board perceived the
  a- advantage
  b- disadvantage

* In general what was their reaction to the system?
* Discuss the bases that you used for evaluating the feasibility of the ATMs?

16- In your opinion, has the bank reached a stage where there is a common vision about how IT should be used in the bank?
* If the answer is no, why
* If the answer is yes, what is this vision? and through what mean is this vision achieved?
17- How do you evaluate the bank's current IT systems?
* Does it allow you to compete on an equal footing with your main rivals?

* Does the current IT infrastructure enable you to introduce any IT systems that your competitors have adopted but you have not, e.g. EFTPoS, Phone Banking, etc..

* If you don't have Phone banking,

EFTPoS,

Credit cards

why did not the bank introduce these systems or products?

18- Is there any cultural gab either in the vision, perception of the role of IT, and/or communication

a- among the top management

b- between the top management and the IT manager(s)

19- What are the main IT problems?

Topics forming the basis of discussion with the IT manager in L5

Informant Background:
* Work experience
* Education
* Position/Main responsibilities
* Nationality and age

- Historical background - Main IT developments within the bank.

- Main changes within the IT environment in the last two years.
        * Any strategic IT systems? Why classified as strategic?

- Reasons for embarking on these changes within the IT environments.

- Role of IT.

- Extent to which the bank takes account of what other banks do.

- Ways in which the bank is different from other banks.

- Approach to the formulation of IT strategies.
        Key players: Internal?
                        External? e.g. Consultants, IT suppliers!
- Impetus / drivers of IT strategies.

- Enablers / Inhibitors of strategically using IT.

- Shared network in Bahrain.

- Means through which a mutual understanding of the role of IT is achieved.

Topics forming the basis for discussion with an SBU manager in L5

Informant background:
  * Work experience   * Education
  * Position/main responsibilities   * Nationality
  * Age

- Factors affecting the competitiveness of the Bahraini banks.

- Role of IT in this division/department.

        * Important IT systems.
          What and Why.

        * Mechanism through which IT requirements are
        defined/initiated

        * Reasons for embarking on these systems.

- Ways in which the bank is different in using IT, if it is so, from its main
competitors.

- Extent to which the bank takes account of what other banks do.

- Impetus/drivers of IT strategies.

- Key players that formulate/direct (or aid in formulating/directing) the
bank's

        a: business strategies.
        b: IT strategies.
              any external Key players, e.g. consultants, IT suppliers.

- Relationship between IT strategies and business strategies.

- Any change in the relationship between the bank and the following
entities based on using IT collectively:
        * Customers   - Describe the nature of relationship
        * Retailers   - Nature of relationship
        * Other banks - Nature of relationship
        * Other key players in the market?

- Means through which business units and IT unit personnel achieve a
mutual understanding of the role of IT.

- Main   a - enablers
              b - hindrances of using IT strategically

Topics for discussion with the vendor:

- Background about the vendor.

- Nature of services offered to the banking sector in Bahrain.

- Nature of relationship with their main banking clients.

Example of an early draft of Meta Matrices to enable data reduction and display.

	F1	F6	F4	F2	F5	F3	L2	L5	L4	L3	L1
						Development of IT strategy:					
	Centralized within the head office. Responsibility of the Branch in Bahrain lays with the regional office.	Centralized Strategy at head and regional offices.	Centralized IT strategy at head office. Responsibility of the Branch IT strategy delegated to the regional office. Previously it was centralized within the head office.	Centralized IT strategy at head office.	No IT strategy for the branch for some time; No change within the IT scene for long time (informant claim).	IT strategy: Centralized in Bahrain.	Decisions related to IT strategy made within the bank in Bahrain.	Strategy developed in Bahrain.	Strategy developed in Bahrain.	Strategy developed in Bahrain.	IT strategy developed in Bahrain, informal.
	Justification: Achieve economies of scale.	Benefits: centralized control over software and hardware. Standardize operations.		Welling to spend on IT, but perceived themselves as disadvantaged in terms of resources as compared to big competitors.	Centralized with the group.	** Top management support to catch up with main competitors.	Follower in the market. Conservative management in terms of spending on IT.	Leader in the market. Compete directly with BBK, however in terms of internal systems may not be in line with BBK.	Leader in the market. Support of top management on spending on IT.	Aim to catch up with the main two local banks. Size of the bank affect its adoption of some IT systems such as the EFTPoS.	Operations manager develop a vision about IT strategy.
	Not leader compared to close competitors. Rational - cost cousins.	Perceived by bank's informant as leader in developing technology world wide.	Not leader in terms to some products like electronic banking. Rational: cost.	Slower responsiveness to local market needs. Had to wait for HQ.	Competitive disadvantage compared to main competitors.	**Marketing of developed systems to international competitors.	Steering committee for approval of main IT projects. Highly influenced by the GM decisions. Some board members participated in these committees.	IT strategy performed every five years in parallel with the bank's overall corporate strategy.	Steering committee chaired by the GM. IT manager secretary of the steering committee. Participants: representatives of business units, IT unit, financial control and audit control.	Consultants played a major role in formalizing the bank's strategic plans. IT strategy was built on the bank's corporate strategy.	Approach top management steering committee for approval and budgeting.
	Enhancements flow from the group root.	Centralized development of systems.	The branches have to adopt the group systems and abide to the group standards.	Enhancement / refinement of the IT strategy came from the branches.	No freedom to approach third parties to meet local needs.	Other international branches' IT strategies were got from Bahrain.	In-house development of systems.	On the macro level, IT strategy built to support the business strategy.	Committee meets smoothly.	Board support was crucial for the approval of the IT strategy.	GM approach Board of directors for approval for major IT projects.
	Slower responsiveness. May take up to a year to respond to local needs.	Bulk of systems rely of mainframes.	Perceived effect: Slow responsiveness to the local market.	Requirements of branches aired to the HQ. Solutions must be from them.	Due to mixed ownership of the bank, the branch board of directors have the power to select / reject from the groups' IT warehouse. CEO recommendations crucial.	Systems developed / tested in two main development centers then introduce to international branches.	Longer time for development.	On the micro level, IT initiatives to support users. Symptoms of communication problems with	IT manager claimed that business goals discussed in the steering committees. IT department representatives	Follower in the market.	IT strategy built around off-the-shelf software package form a main software vendor.
	Standardized core banking system world wide. Develop for high potential markets	Systems realized through the communication lines to the branches world wide. No	Develop for more potential markets, introduce at			Turnaround strategy: Focus on changing infrastructure within the bank.				Steering committee, headed by the CEO participants: head of the	Hardware architecture strategy built

499

F1	F6	F4	F2	F5	F3	L2	L5	L4	L3	L1
once available introduce elsewhere.	developments made in Bahrain. Assistance from regional office for implementation.	minimal cost to the group. Some systems unique to the requirement of Bahrain developed locally.	Standardized core banking system world wide.	Standardized core banking system world wide.	Business goals driver of the turnaround IT strategy.		users. Limited effect on IT overall strategy.	provide advise as to how much and how long it would need to implement.	functional areas and the IT manager.	around Downsizing, client server and LAN.
Have a competitive disadvantage as compared to immediate competitors.	Solution to meet the global markets rather than Bahrain market.	Standardized core banking system world wide.	Develop for high potential markets once available introduce elsewhere.	Develop for high potential markets once available introduce elsewhere.	Informants mentioned an IT steering committee and ad hoc committees for determining IT strategies in which the top senior management participated.		Limited influential power of the users.	IT projects from the users passed to the steering committee secretary. IT department makes feasibility studies, and passes these studies to the steering committees for approval and prioritization.	Committee met every month. Responsible of IT developments and follow up progress in implementing IT strategies. Ad hoc committees for major projects, headed by members of the board.	
Depend on internal development.	Standardized core banking system world wide.	Develop for high potential markets once available introduce elsewhere However not all systems filtered to Bahrain as these systems may suite the requirements of the European market but not Bahrain.			There was a formal procedure for developing IT strategy.		Corporate planning steering committee. Source of impetus of IT strategy.			
Outsourcing, a second option to speed up adoption process.	The Branch can't alter nor change the specifications of the adopted systems.				Top down: driven by business goals.		IT steering committee: made up from the top senior management: CEO, GM, IT manager, Corporate Planning Senior Manager. Duties insure alignment of IT strategies with the bank's corporate strategies, and follow up the implementation of the IT strategy.	Head of functional units discuses their business strategies and seek potential IT solutions from the IT department representatives. Voting power with the business/users representatives. No voting power with the IT department representatives.	Users participated in defining their IT needs and in the selection process.	
Disadvantage: lack of developing in-house expertise.	Responsiveness to local market may become a problem due to the large size.	Local initiatives to meet the unique business requirements in Bahrain.			Bottom up: evaluating and replacing old infrastructure.				Strategy built around meeting the business goals and restructuring the IT scene.	
Less extent: Off-the-shelf packages.					Links to users perceived crucial for meeting the users needs.				Outsorcing of credit cards.	
Infrastructure: trend towards client server technology. Downsizing a potential trend. No clear vision as how to go (downsize or continue with mainframe) was yet reached due to high amount of investments	Main systems took long period for developing, e.g. electronic banking took 10 years.				In house development of banking systems.			Ad hoc		
	Quantum leap every 5 years, 'TSV claim.									

500

Sample of matrices used for data reduction.

Role of vendor:	Mnt	IBM	AT&T	ITS
Mutual discussion of future plans between vendor- his future developments and foreign bank's strategies at H.Q. level		*		
Claimed that they influenced infrastructure and business models		*		
e.g. opening midrange systems and mainframes to PC links.		*		
Educate the user, increase his literacy, through seminars, expertise and exhibitions, create demand	*	*	*	*
Claimed that awareness among bankers needed attention	*	*		*
Understand requirements and provide enabling technologies:				
work as 'strategic partners'- understand what the banks are looking to provide by seeking a given IT to enable provide the best technology.		*	*	*
Understand partners' business strategies and future plans to make long term business with them		*	*	*
Close relationship with the clients is required		*	*	*

Examples of Islamic banks' finance:

"Morabaha (Financing resale of goods)

Islam acknowledges the utility of trade and commerce. Utilising the Morabaha form, a commercial or industrial client may acquire capital goods, inventory or raw materials through the bank. Individuals may also utilise the Morabaha form to acquire capital and durable goods such as machinery or automobiles with financing provided by the bank.

Under the Morabaha form, the bank purchases goods from a third party at the request of its clients and sells the goods to such clients on deferred payment terms at a higher price receiving its clients unconditional obligation to pay such higher price on a future date or dates. The bank may obtain collateral from the client to ensure payment.

Musharaka (Mutual participation financing)

The Musharaka is identical to the Modaraba except that in addition to providing management and other services, the client shares with the bank in providing equity. The client, therefore, receives, for such equity participation, a defined percentage of the same distributable revenue to which the bank looks for the recovery of its investment plus profit. Project income and expenses are monitored through a controlled account at the bank and operated jointly by the partners. The bank may participate in the management of a Musharaka where a new entity is to be established. Risks and rewards of capital investment are shared by both the client and the bank.

Ijara Wa Iktina (lease purchase financing)

Under such contract, the Islamic financial institution finances (purchases) equipment, buildings or an entire project for the purpose of renting the same to the client against an agreed rental, together with the client's agreement to make payments into an Islamic investment account which will eventually lead, as promised in the agreement, to the client's purchase of the equipment or project from the institution. Profits accumulating in the investment account are for the benefit of the client.

Ijara (leasing)

This permits the financing by the Islamic institution of equipment, buildings and other facilities as requested by a client against agreed rental.

Modaraba (Participation financing)

Under the terms of Modaraba contract, the bank supplies funds for use defined purposes in exchange for a percentage share in a defined revenue stream. The bank does not receive the unconditional obligation of its client to return the principal sum invested with a guaranteed profit but monitors the use of funds closely.

Financing composite

Financing can be provided to a customer in more than one form simultaneously depending upon the nature of the business."

Source: One of the Islamic banks booklets.