Internet Technology Adoption in the Banking Industry

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A thesis submitted to Victoria University of Technology for the fulfilment of the degree of Doctor of Philosophy (PhD.)

January 2005

ACKNOWLEDGMENT

First of all I would like to say thanks to God (Allah the almighty) for giving me the strength and power to carry on through this project.

Secondly, without the marvellous help I received from my supervisors, my family and my friends this thesis would not have been accomplished. Specifically, I thank my supervisors: professor Robert Clift, Dr. Arthur Tatnal and Dr. Keryn Chalmers (who was my previous supervisor) for their valuable time, guide and support. Their knowledge and experience enabled me put the pieces of this thesis together. Thanks also go to School of Accounting and Finance in Victoria University for their help and assistance. I also would like to thank all participants in the Omani and Australian banking industry who contributed significantly with their insightful views and opinion to this thesis.

Secondly, I would like to say many thanks to my family who always were with me. Especially my loving grandmother Fatma Al-Hajri who passed away in 1990 and my father Amor Al-Hajri who also passed away in 1982. They provided me with love, patience and hope. God bless them all and let their soul rest in piece amen.

Finally, I extend my special thanks to Dr. Muneer Al-Maskery and Dr. Abdul-Hakeem Al-Ismaili for their valuable help in the Ministry of Manpower in Oman. I also would like to extend my thanks to all my friends especially Abul-Latif Al-Bulushi and Sameer Al-Zadjali for their wonderful help.

ABSTRACT

The banking industry in Oman is of major importance to Oman's economy, yet the banks continue to conduct their banking transactions using traditional methods. A strong banking industry supports economic developments significantly through its efficient financial services. The role of the banking industry in trying to achieve the objectives outlined by the Sultan of Oman will depend heavily on the industry's capabilities. This requires banks to introduce changes (both at the procedural level and at the informational level) such as the banking industry moving from traditional distribution channel banking to electronic distribution channel banking. Given the prevalence of Internet technology adoption by the banking industry in developed countries, the reason for the lack of such an innovation in developing countries such as Oman is a fruitful research question. The aim of this thesis is to explore managers' perceptions of Internet technology and their tendency to adopt it in the banking industry. Specifically, the research question addressed in this thesis is

What were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

In an attempt to accomplish this aim, this thesis was carried out as follows:

(1) extant literature was reviewed to explore the perceptions that tend to affect Internet technology adoption in the banking industry, namely:

- perceived relative advantage
- perceived organisational performance (not previously investigated)
- perceived ease of use
- perceived organisational/customer relationship (not previously investigated)

(2) a semi-structured interview with 27 responsible bank managers (decision makers) from the two banking industries of Oman and Australia was carried out.

(3) from an interpretative qualitative analysis (utilising NVIVO software)[1] of the two banking industries of Oman (non-adopter of Internet technology) and Australia (adopter of Internet technology), the findings revealed that the four perceptions

[1] NVIVO is computer software used to assist qualitative researchers to conduct qualitative analysis of evidence collected through in-depth interviews.

jointly provided a deeper understanding of Internet technology adoption in the banking industry. The major enablers and inhibitors of Internet technology adoption in the banking industry are illustrated in Figure 6.1,6.2,6.3, and 6.4 in Chapter 6.

This study is important for both academics and professional organizations because it emphasises the enabling and the inhibiting factors of Internet technology adoption and how to manage them effectively for both adopters and non-adopters. It indicates the need for both banking industries of Oman and Australia to consider improving their Internet technology adoption. Furthermore, the list of the enablers and the inhibitors provides insight for software companies to consider improving Internet technology as a whole in the banking industry.

DECLARATION

I, Salim Al-Hajri, declare that the PhD thesis entitled Internet Technology Adoption in the Banking Industry is no more than 100,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

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30/12/2004

Salim Al-Hajri Date

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LIST OF ABBREVIATIONS AND DIFINITION OF TERMS

For the purpose of this thesis a list of used abbreviation and definition of terms are provided bellow:

List of Abbreviations

IT/IS	Information Technology/Information System:
WWW	World Wide Web
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour
TAM	Technology Acceptance Model
DIT	Diffusion of Innovation Theory
RA	Perceived Relative Advantage
P	Perceived Organisational Performance
CR	Perceived Customer/Organisational Relationship
EOU	Perceived Ease of Use
PBC	Perceived Behavioural Control
A	*Attitude*
SN	*Subjective Norm*
BI	*Behavioural Intention*

List of Definition of Terms

Information technology/Information systems	Computer technology used to process and store information to achieve efficiency.
Internet technology	Electronic distribution channel used to process information (Kalakota and W*h*inston, 1997).
Traditional distribution channel	In the early 20th Century commercial business and banking relied on traditional means - telegram, telephone, telex, facsimile and traditional mail system (Winston, 1998) to conduct business, however, advancements in electronic technology brought changes - faster and cost effective mean to conduct business transactions.

Electronic distribution channel	Electronic networks and protocols used to exchange information, services and financial transaction between two or more parties (Kalakota and Winston, 1997).
Privatisation	Transfer of ownership of some government assets to the private sector.
Private sector	Business owned by private firms.
Muscat Security Market	Established in 1988 to regulate capital market - register and transfer ownership securities, and effect mortgages, liens and payment of dividends.
Traditional economy	In the past Oman's economy relied on traditional exports of dates, limes and fish and import of limited basic foodstuff and simple goods.
Traditional methods	Telegraph, telephone, fax, and traditional mail system.
Diversification	Development of various resource of income beside oil revenues to reduce risk.
NVIVO	Refers to a computer software program used for indexing, searching and theorising non-numerical unstructured data (Richards, 2002).
Globalisation	Refers to the business organizations that consider doing business at a global scale to be able to deliver its standard products/services.
World Wide Web	Refers to "... the equivalent of a virtual trade show. It allows companies access to groups of customers not being reached before" (Daniel and Storey, 1997, p. 891).
Internet Banking	Refers to "In its very simplest form electronic banking can mean the provision of information about the bank and its products via a page on the World Wide Web (WWW)". (Daniel and Storey, 1997, p. 891).
Online Transactional Banking	Refers to "... utilising the [I]nternet and other electronic vehicles as channel for the distribution of product information (Daniel and Storey, 1997, p. 891).
Search engines	Refers to a computer program that enables the user to search information utilising HyperText Markup Language (HTML) (Kalakota and Winston, 1997).

Chapter One: Introduction

1.1 Introduction

In developed countries, such as Australia, Internet technology has been embraced by the banking industry. Banks have pursued strategies to encourage their clients to engage in Internet banking. In developing countries, financial institutions have been less inclined to adopt Internet technology and thereby capitalise on the benefits claimed to be associated with its implementation, namely, simplicity, convenience and usefulness. Oman is an example of a developing country committed to economic growth but with a banking industry that is yet to embrace Internet technology.

Traditionally, Oman has been heavily reliant on oil as its main income source. However, fluctuations in world oil prices leave the country exposed to commodity price risk. During the 1990s, Oman tried to achieve more diversified income sources. His Majesty, the Sultan of Oman, summarised the vision for Oman's economy as follows:

> The government has made major efforts in recent years to achieve comprehensive development in all fields. Now that it has succeeded, with the help of God, in moving the country from a traditional economy to a modern developed one, our future plan will be based on the balanced management of income and expenditure and the preservation of that balance so that Oman's present high prestige in the economic sphere, will be preserved. Therefore, the duty of the private sector in playing an active role in the development of the economic process and in the achievement of national goals by taking appropriate initiatives, as in case in all developed countries, is of great importance (Qaboos bin Said speech, June 2, 1995, reported in Ministry of Development, 1996).

The banking industry in Oman is important because a strong banking industry supports economic developments significantly through its efficient financial

services. The role of the banking industry in trying to achieve the objectives outlined by the Sultan will depend heavily on the industry's capabilities. Banks will need to introduce changes (both at the procedural level and at the informational level) such as moving from traditional distribution channel banking to electronic distribution channel banking. Though, the banking industry is of major importance to Oman's economy, the banks continue to conduct their banking transactions using traditional methods. Given the prevalence of Internet technology adoption by the banking industry in developed countries, the reason for the lack of such an innovation in developing countries such as Oman is a fruitful research question. In this section, the aims, significance, contribution to knowledge and justification for the study is provided in sub-sections 1.2, 1.3, 1.4, and 1.5 respectively.

1.2 Aims of the Study

General Aims: to determine inhibitors and enablers to the adoption of Internet technology in the banking industry.

Specific Aims: (1) establish what the inhibitors and enablers were in the Australian banking industry; (2) establish what the inhibitors and enablers were in the Oman banking industry; and (3) inform the Oman experience with the more mature Australian experience.

1.3 Significance of the Study

In 2002, the percentage of population that could be defined as Internet users reached approximately 59%, 57%, and 45% in the US, UK, Australia respectively (www.nua.ie/survey/). Worldwide Internet users reached 606 million by 2002 (www.nua.ie/survey/) and analysts expect the figure to reach one billion by the year 2004. They predict that users of Internet banking transaction in Europe will grow to 84 million by 2007 (www.nua.ie/survey/). The Market Intelligence Strategy Centre (MISC) [1] reported that there is already 6 million registered users of Internet banking

[1] The Market Intelligence Strategy Centre is responsible for collecting data related to electronic commerce in the banking industry in Australia.

Specifically, this study will contribute to the body of knowledge by:

(1) Solving an existing problem (reluctance to adopt Internet technology) in the Omani banking industry;

(2) Expanding the TRA, TPB, TAM and DIT to include two variables previously not considered — perceived organisational performance (P) and perceived customer/organisational relationship (CR). It is expected that these four variables will jointly provide a better understanding of the Internet technology adoption in the banking industry; and

(3) Expanding the understanding of Internet technology adoption in a developing country, namely, Oman, and comparing this with the experiences in developed countries such as Australia.

These points are elaborated in Chapter 2 and 3.

1.5 Justification for the Study

Benefits associated with Internet technology adoption include simplicity, convenience and usefulness. However, the ability of electronic commerce (hereafter e-commerce) to deliver these benefits and the revolution it promised in the financial services sector has recently been questioned (Ernst and Young, 2001). Comparing and contrasting Internet technology adoption in the banking industry in Oman (non-adopter) with those of the Australian banking industry (adopter) will contribute to the TAM literature.

A major part of the study will be conducted in the developing country of Oman, where the banking industry is expected to play a key role in the next phase of the country's economic development by demonstrating its maturity, resilience and commitment.

1.6 Research Methodologies

This study involves an exploratory investigation of Internet technology adoption in the Omani banking industry (e.g., in a developing country) and compares this with the situation in the Australian banking industry.

Specifically, the study explores what were the major enablers and inhibitors of Internet technology adoption in the banking industry of both developed and developing countries. Moreover, it aims to address the problem of the reluctance to adopt Internet technology in the Omani banking industry.

Given the exploratory nature of this investigation, semi-structured interviews were utilised in both Omani and Australian banking industries to explore the Internet technology adoption.

The Australian banking industry was considered in this investigation because of the advanced development of its Internet Technology adoption. In comparing the Internet technology adoption in the banking industry of a developing and a developed country the study hoped to enrich the analysis of data and hence explore the major enablers and inhibitors of Internet technology adoption in the banking industry and hence provide rich understanding of how to improve Internet technology adoption in the banking industry.

Twenty-seven interviews were conducted with strategic, tactical and operational managers at each of nine major banks (five Omani banks and four Australian banks). Details of these interviews are provided in Table 5.1 and 5.2.

Data were gathered through the semi-structured interviews with the managers through available internal reports and available public reports to facilitate understanding. The collected data were analysed (e.g., data transcribed, reduced and displayed) utilising NVIVO-version 2 (computer software) to assist in the analysis.

1.7 Major Findings of the Study

This exploratory study found that managers' perceptions of four issues, namely, relative advantage, organisational performance, customer/organisational relationship and ease of use, jointly provided a broader understanding of the Internet technology adoption in the banking industry than that proposed by previous theories/models (e.g. TRA, TPB, TAM and DIT). These previous theories/models only utilised two major variables (perceived relative advantage and perceived ease of use). This study has explored two other variables (e.g., perceived organisational performance and customer/organisational relationship) not previously investigated to understand Internet technology adoption in the banking industry. In addition, the study has provided deeper understanding of major concerns of the decision-makers in the banking industry, seen from their perspectives. These concerns are elaborated in detail in Chapter six.

1.8 Organisation of this Thesis

This thesis is organised into six chapters. An overview of these Chapters is provided as follows:

Chapter One

Chapter one summarises the discussion on Internet technology adoption in the banking industry. Specifically, it provides an introduction to the research problem, the aims of the study, its significance, its contribution to knowledge, justification for the study, research methodologies, its major findings and its organisation.

Chapter Two

In this Chapter extant literature related to Internet technology adoption in the banking industry is extensively reviewed. A discussion on the identified research issues related to Internet technology adoption in the banking industry and gaps

within this literature are provided for a broader understanding. In this Chapter, identified research issues, include:

(1) Perceived relative advantage (RA);

(2) Perceived organisational performance (P);

(3) Perceived customer/organisational relationship (CR); and

(4) Perceived ease of use (EOU)

Chapter Three

In this Chapter an extensive review of the extant literature related to the framework for understanding Internet technology adoption in the banking industry is provided. It also includes a detailed discussion on the identified theories/models related to an understanding of such adoption and an outline of gaps within this literature. Theories/models identified in this Chapter include:

(1) Theory of Reasoned Action (TRA);

(2) Theory of Planned Behaviour (TPB);

(3) Technology Acceptance Model (TAM); and

(4) Diffusion of Innovation Theory (DIT)

Chapter Four

Given the complexity of understanding Internet technology adoption in the banking industry, this Chapter presents a detailed discussion of research methodologies and design utilised to accomplish the aims of this research. In addition, a detailed description of the banking industry sites visited is also provided.

Chapter Five

This Chapter presents a detailed analysis of responses obtained from 27 responsible managers (at three different levels of management) from the Omani and Australian banking industries. In order to understand Internet technology adoption in the banking industry four variables were jointly analysed from the perspective of the decision-makers in the banking industry. The analysis includes:

(1) Perceived relative advantage (RA) and tendency to adopt Internet technology;

(2) Perceived organisational performance (P) and tendency to adopt Internet technology;

(3) Perceived customer/organisational relationship (CR)) and tendency to adopt Internet technology; and

(4) Perceived ease of use (EOU)) and tendency to adopt Internet technology

The major concerns (enablers and inhibitors) that emerged from the analysis of Internet technology adoption in the two banking industries of Oman and Australia are also presented.

Chapter Six

The analysis presented in the previous Chapter is discussed in detail. The findings of this investigation indicate that the four perceptions (relative advantage; organisational performance; customer/organisational relationship; and ease of use) jointly provide a broader understanding of Internet technology adoption in the banking industry. The major concerns (enablers and inhibitors) that emerged from the analysis of Internet technology adoption in the two banking industries of Oman and Australia are summarised. Briefly this Chapter includes: a review of the thesis; a summary of the major findings; a discussion of these findings; an outline of the practical implications of the research; the limitations and ideas for future research; and concluding comments.

Chapter Two: Review of Extant Literature - Research Issues

2.1 Introduction

Chapter 1 introduced the research background. In this Chapter the extant literature is reviewed in order to explore Internet technology adoption in the banking industry as well as to identify the research issues associated with it to develop an understanding of how to solve the problem of Internet technology adoption in the Omani banking industry. In addition, the review will assist in addressing some of the issues that have not been answered by previous studies.

Specifically, section 2.2 will discuss the definition of Internet technology adoption in the banking industry; section 2.3 will identify the research issues; and section 2.4 provides a summary of the Chapter.

2.2 Definition of Internet Technology Adoption in the banking Industry

The definition of Internet technology adoption in the context of the banking industry including: its role in developed countries; its role in the banking industry; the classification of Internet technology in the banking industry; Internet banking services; and electronic communication media technologies in the banking industry, is described in sub-sections 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5 respectively.

2.2.1 Role of Internet Technology in the Developed Countries

> Technology change is perhaps the most important source of structural change in an economy, because it alters the mix of products, industries, firms, and jobs, which make up an economy (Malecki, 1991, p. 26).

Internet technology has played a major role in economic development in developed countries (Kalakota and Whinston, 1997; Ghosh, 1998; Raisinghani, 2000). Kalakota and Winston (1997) define the Internet as the use of the electronic distribution channel to enable two or more parties to exchange goods, services and information faster and more cost effectively and to reach customers anywhere in the world. Another definition of Internet technology is "... the ability to do business electronically, and it can be used in a variety of business environments: business-to business, business-to-consumer, business-to-government, government-to-constituent" (Havlik, 2001, p. 68). Internet technology provides a means that could potentially affect how organisations perform their business and compete. It has a superior role in reducing cost and eliminating uncertainties (Kelley, 1989). It has been used to "... generate additional revenue and improve customer care and retention" (Havlik, 2001, p. 68). This means that in developing countries such as Oman Internet technology is important because: (1) it can change the product/ service mix; (2) it can change the industry; and (3) it can change the economy.

2.2.2 Role of Internet Technology in the Banking Industry

Daniel (1999) described Internet banking as the provision of banking services to customers through Internet technology. Other authors (Daniel, 1999; Karjaluoto, 2002a) indicated that banks have the choice to offer their banking services through various electronic distribution channels technologies such as Internet technology, video banking technology, telephone banking technology, and WAP technology. However, Karjaluoto (2002a) indicated that Internet technology is the main electronic distribution channel in the banking industry. In more detail Karjaluoto, (2002a) described Internet banking as an online banking that involves the provision of banking services such as accessing accounts, transferring funds between accounts, and offering an online financial services.

Therefore, in this study, Internet technology in the banking industry can be defined as the accessibility and exchange of banking services and or banking communication technologies on web sites available over through the World Wide Web[2], utilising Internet technology.

Internet technology has the potential to play a major role in the banking industry and hence in the economy by enabling banks to offer innovative banking services to their customers (Sullivan, 2000). The author asserts that banks, customers, intermediaries and society benefit in the Internet banking process. The importance of using IT/IS in the banking industry has also been emphasised by others (Daniel, 1999; Wisner and Corney, 2001; Thornton and White, 2001). They highlighted the fact that the use of IT/IS would enable bank customers to conduct their business from home, hence transportation cost and time would be reduced.

Specifically, Karjaluoto (2002b) identified two major benefits gained from Internet banking:

(1) benefits for banks including: banks would be able to reduce transactional costs, reach customers anywhere, and enhance its reputation in the industry; and

(2) benefits for customers including: customers would be able to take full advantage of various banking services available online.

O'Connell, (1998, p. 1) summarised these points as

> The Internet has the potential to change distribution arrangements dramatically, remake the way banks deal with customers and cut back costs.

---

[2] It "... is currently the most popular Internet "navigation" tool for finding and getting information in a multimedia format with color graphics, audio, and video ... This tool not only allows users to find and access documents but also to follow "hypertext" links from one document to another. The documents need not be at only one site – users can traverse the Internet, going around the world from network site to network site as they follow the links in one document to another document (Kalakoa and Whinston, 1996, p. 128).

2.2.3 Classification of Internet Technology in the Banking Industry

Internet technology can be classified into three main groups: (1) Internet; (2) Intranet; and (3) Extranet. These three classifications are discussed below.

Internet

Kalakota and Whinston (1996) defined the Internet as

> ... very general infrastructure targets not only one electronic commerce application, such as video-on-demand or home shopping, but a wide range of computer-based services, such as e-mail, EDI, information publishing, information retrieval, and video conferencing. Simply put, the Internet environment is a unique combination of postal service, telephone system, research library, supermarket, and talk show centre that enables people to share and purchase information (p. 85).

So, it has the potential to affect the way banks operate in the industry. O'Brien (2000, p. 151) further defines the Internet as "A worldwide system of computer networks that supports data communication services such as file transfer, electronic mail, Internet rely chat, Internet telephony and the World Wide Web". It is a public electronic communication system that enables all parties (e.g., banks, customers, intermediaries, and general public) to access and exchange database information, goods/products/ideas, and money through the web site available on the World Wide Web.

Internet technology can deliver a variety of services/products to suite various customers (individual and corporate business). These include: conference meeting services (e.g., video conferencing); information transfer services (e.g., e-mail and fax); database services (e.g., access to libraries); information processing services

(e.g., an online fund transfer software); and resource-sharing services (e.g., access to printers and fax machines) (Kalakota and Whinston, 1996, p. 124).

To stress the importance of Internet technology in the banking industry, it is interesting to note that Kare-Silver (2001, p. 40) quoted Bill Gates saying "... it will wash over nearly all industries, drowning those who don't learn to swim in its waves".

Previously, business organisations utilised Internet technology to market their products online. Now, however, these business organisations are integrating the Internet into their business strategy. This enables business organisations to present their products/services on the web sites, utilising digital features such as sound, image, video, animation, etc... Moreover, it enables customers' options to customise (or to choose) their preferences on items (e.g., searching, selecting, and ordering the items).

Kalakota and Whinston (1996) indicated that business could be conducted between business organisations-to-customers and between business organisations-to-business organisations. To accomplish business conduct online, the Internet requires computer hardware, computer software, network equipment, and telecommunication equipment. Therefore, though the Internet can be used as public electronic commerce to exchange goods, services, ideas and money over the World Wide Web (hereafter WWW), the banking industry also needs to address challenging issues such as an online traffic and other Internet technology adoption issues.

Intranet

Cunningham and Froshl (1999, p. 231) defined the Intranet as "An internal communications and computing system based on the Internet". It is a private network with limited access capability. The development of such a network would enable all parties (e.g., banks employees, customers, and partners) to access and exchange database information, goods/products/ideas and money through a web site available on the World Wide Web. For example, banks' employees can communicate and coordinate their common goals with their customers and their partners. In an attempt to reduce costs (e.g., reduce paper work, share database

information and inform each other online) and to improve quality (e.g., innovate banking products/services), banks utilise the Intranet. Kalakota and Whinston (1997) also indicated that business organisations (e.g., banks) could utilise the Intranet to market their products/services as well as to manage their distribution channel. Although, utilising the Intranet for the purpose of internal communication may lower the risk of exposing the organisation to external threat (e.g., security and privacy), however, benefits may be limited to internal organisation.

Extranet

The extranet is defined by Lawrence et al. (1998, p. 285) as "... a collaborative network that uses Internet technology to link business with their suppliers, customers or other businesses that share common goals". It is an extended Intranet with more than one Intranet. Business organisations, their trusted partners and their customers can work together to achieve shared goals. The extended Intranet offers these parties the opportunity to access and exchange wider databases of information, innovations/ideas and money. The collaboration between trusted partners ensures improvement in the quality of services and a lowering of costs associated with accessing and exchanging information, innovations/ideas and money. The Extranet is considered to be a safer network than the Internet to conduct business due to its limited accessibility for the general public. Accessibility of the Extranet is only available to trusted parties for the purpose of collaborative work.

2.2.4 Internet Banking Services

Wang et al. (2003) claim that in the past Internet banking technology was under-utilised. For example, business organisations used it only to market their products and services. Thornton and White (2001), who examined customer orientations and usage of financial distribution channels in the Australian financial industry, found that more recently most financial institutions, faced with competitive pressure after the introduction of deregulation in 1983, have rethought their strategies to take full advantage of Internet technology. They highlighted the fact that these institutions were now searching for an effective distribution alternative to reduce cost and improve the quality of their service in order to sustain their position in competitive markets through the strategy of differentiation. Thornton and White argue that most

British financial institutions have been successful in differentiating their marketing mix in the industry through effective distribution channels (e.g., Internet technology). Internet technology, they suggest, has the potential to affect how these institutions conduct their business in the industry (e.g., reduce cost and improve quality). Now most institutions were focusing on satisfying customers rather than copying competitors in the industry. Thornton and White (2001) foresee that with globalisation of financial markets the intensity of competition will only increase and hence will advance further rapid technological change. This means that if banks wish to sustain their competitive advantage in the global financial markets they will need to rethink their technological strategies in the industry.

Dannenberg and Kellner (1998) argue that banks in developed countries should offer standard Internet services beside general information and continue to innovate if they seek to maintain their long-term competitive advantage. They suggest standard Internet banking services, including personal accounting, saving plans, financial statements, loan processing, real estate, insurance, fund transfer, order cheque, bill payment and electronic mail (e-mail) communication with customers, be provided to customers through the Internet to reduce the cost of maintaining bank branch networks and transaction costs. Furthermore, they argue that in a competitive market a bank is likely to offer 24-hour service to customers. This requires more advanced electronic distribution channels. They see that in the future there is a possibility of conducting counselling via Internet video conferencing, as they perceived it to offer the same feeling as face-to-face branch counselling. Indeed, the adoption of this advanced IT in developing countries is critical to their economic development, they argue. In developed countries such as Australia, banks adopt Internet technology to lower costs and improve service quality levels (Johnston, 2001). KPMG (1999) also reported that most major retail banks in Australia are now offering their customers access to their accounts and transactions online.

Interesting findings have been revealed by Wisner and Corney (2001), who compared traditional and Internet practices in the banking industry. They indicated that Internet presence presents uncertainties beside opportunities and hence information about an online banking from the perspective of the customer is essential for formulating effective strategies. The authors highlighted the fact that most banks had been only copying competitive banks in the field of Internet banking, however, now banks seemed to be focusing on satisfying customers rather than following competitors in the industry. From an observation of 82 banks with

Internet presence, they identified 20 web page characteristics, and three groups as follows

> Almost all of the Internet banks had some form of customer contact capability. At lease half of these banks offered information regarding loan rates and checking/savings account rates, general bank information (such as bank history, size, etc.) investment information (such as ticker symbol, current stock price, dividend information, etc.), new account applications, and small business or commercial banking information. A small number of the Web sites offered a wide array of potentially helpful information such as credit card applications, frequently asked questions, contact names and phone numbers, and newsletters (p. 246).

The authors also made this observation on 77 bank web sites with customer feedback capability

> More than half of the feedback systems included blank areas for street and e-mail addresses for a return reply. Most of these sites also included a flexible length blank area for free-form questions and comments. A smaller percentage, but still a significant portion of the feedback systems only listed an e-mail address and/or a phone number for comments or questions. A few of the feedback systems were quite detailed, and included all of the above characteristics plus specific information click-boxes, online site quality survey and links to other Web sites (pp. 247-248).

The challenge to expand and maintain banking market share has influenced many banks to invest more on the Internet (Tan and Teo, 2000). The authors indicated that US banks were already offering Internet banking services. The emergence of Internet banking had made many banks rethink their IT/IS strategies in the competitive markets. Indeed, Internet banking enables customers to conduct their banking transactions electronically from anywhere and at any time. The authors revealed that Internet banking had been utilised in the past to market banking services, however, today most banks in the USA utilised it to offer banking services such as writing cheques, paying bills, transferring funds, printing statements and inquiring about account balances. They suggested that the banks that fail to respond to the emergence of Internet banking in the market are likely to lose some of their

customers. They indicated that the cost of offering Internet banking service is less than the cost of keeping branch banking.

This notion was also indicated in the study conducted by Jasimuddin (www.arraydev.com) who examined the role of Internet banking in Saudi Arabia, a neighbouring country of Oman. The author indicated that the majority of Saudi banks had taken advantage of Internet technology to establish web sites but only a few banks offer Internet banking services. Jasimuddin suggested that if the Saudi Arabian banking industry wished to be successful in the global economy it would need to integrate Internet technology into its banking strategy.

Indeed, banks in Oman must seriously consider Internet technology adoption in order to fulfil the role expected of them by the banking industry. Despite the fact that Internet technology acceptance is growing worldwide, banks in Oman are yet to adopt Internet technology. The reluctance of Internet technology adoption by Omani banks suggests that managers perceive the costs of Internet technology adoption to outweigh the benefits. This can potentially be explained by the fear of the consequences of failure in the case of high investment projects (Cule et al., 2000; Butterfield and Pendegraft, 2001) as well as perceived customer dissatisfaction.

The Internet banking services can be delivered on the World Wide Web (WWW) and customers can access the information related to them through search engines (e.g., through HyperText Markup Language called HTML) according to three major levels of usage, namely: informational service usage, intermediate service usage, and full service usage.

Informational Service Usage

Informational service usage emphasises the importance of informational content without interacting with the service (e.g., Internet banking technology). It has more to do with educating stakeholders about Internet banking technology (e.g., bank employees, customers, partners, shareholders, and the general public).

Intermediate Service Usage

Intermediate service usage puts more emphasis on the role of customers' interactions with the Internet banking technology but with limited capability. For example, customers and partners can access and exchange some of the facilities provided in the Internet banking services and electronic communication media technologies for inquiry purposes.

Full Service Usage

Full service usage gives full service facilities with full customisation. For example, bank customers are allowed to have full control of the banking services and communication technologies such as updates or deletion of accounts. This service enables customers and partners to have total control of the banking services and communication technologies. However, full service capability requires skills in order to manage banking transactions.

2.2.5 Electronic Communication Media Technologies in the Banking Industry

There are three types of electronic communications media technologies that could be identified in any business organisation, including the banking industry, namely: Electronic mail (E-mail), Voice mail (V-mail) and Video banking. These three communication technologies are explored further below.

E-mail and V-mail Technologies

Electronic mail has the potential to affect the level of communication between banks and its customers and partners in the industry. O'Brien (2000, p. 149) defined electronic mail (e-mail) as "... an exchange of computer-stored messages by

telecommunication". The technological digital features (e.g., text, animation, etc...) of the e-mail enable business organisations such as banks to communicate their products/services and improve relationship with their customers. Unlike in the past, most people nowadays use e-mail as a way of communication. Indeed, banks often also extend their use of e-mail by attaching greeting cards with e-mails sent to their customers and partners.

Lee (1994) also highlighted the fact that the importance of e-mail uses in improving the level of communication in business organisations.

Karahanna and Limayem (2000) also noted the importance of utilising e-mail in organisational communication because these technologies support asynchronous messages exchanging, messages saving, and messages forwarding. Unlike previous studies (e.g., Adams et al., 19992; Davis, 1989), they argued that these electronic communication technologies (e.g., e-mail and v-mail) are different, due to their different applications in business organisations. They elaborated further by saying that, due to the difference in the application of these communication technologies, users' perceptions would also be different. They proposed that different antecedents might influence choices for using e-mail or v-mail. The question raised in their study provided insights into how antecedent perceptions influencing e-mail and v-mail are different, and how to manage these antecedents. In an attempt to examine their proposition, they expanded the TAM, as proposed by Davis (1989), by incorporating antecedents of both perceptions (usefulness and ease of use). Drawing on the theories of communications media choice and use, they identified several antecedents related to the fundamental perceptions of TAM (e.g., usefulness and ease of use), namely:

(1) social influence to the communication technologies media (e.g.,, e-mail and v-mail);

(2) social pressure presence in the media;

(3) physical accessibility of the media;

(4) informational accessibility of the media;

(5) media style; and

(6) availability of training and support.

Karahanna and Limayem's study further suggests that the use of these technologies for communication purposes could influence informed decisions in business organisations. These types of technologies, they indicated, have the potential to affect communication levels in the business organisation, in terms of coordinating strategies, planning and activities. Moreover, they indicated that better communication could improve relationships with customers and partners.

These two communication technologies were identified thus

> ... v-mail provides dynamic verbal cues that reflect the sender's tone of voice, inflections, and mood, whereas e-mail can only transmit static visual cues in text. Moreover, the audio nature of v-mail makes it more amenable to the transmission of feelings and emotion. Thus e-mail is expected to be used in a wider range of communication tasks requiring richer media (Karahanna and Limayem, 2000, p. 53).

The authors believe that the e-mail is not intended to replace face-to-face communication, however, they see that replacement it is possible with the v-mail technology. They also indicated that e-mail is more secure than v-mail due to the identification and password requirements necessary to access the technology. Unlike v-mail, e-mail messages could be saved longer in the e-mail inbox, and electronic filing and printing facility were also possible. Moreover, message search was much easier in the e-mail technology than in the v-mail technology due to the random facility provided in this type of technology.[3]

Video Banking Technology

Video banking enables banks and customers to communicate visually through video camera. Harpin (1999) defined video banking as the provision of video banking facility to customers who would like to communicate their available financial

[3] E.g., opposite to e-mail technology, v-mail technology has sequential search facility.

alternatives face-to-face with the banks' representatives. The author indicated that the video banking has the feature of videoconferencing, which enables both customers and banks to see and speak with each other. This type of technology would enable both parties to see each other's facial expressions while conducting banking transactions. The requirements for video banking were identified as personal computer, video camera, scanner, speakerphone set, and printer. The benefits identified by the author include opening of accounts, transferral of funds between accounts, ordering of cheques, loan processing, credit card processing, payment processing. Harpin (1999) indicated that banks and customers could develop good relationships with this method. The author also asserted that the use of the privacy handset would ensure privacy protection for customers. Furthermore, the banking industry could gain the advantage of educating its customers about its services and products as well as being able to provide them with financial advice.

2.3 Exploring the Research Issues

In section 2.2 the definition of Internet technology adoption in the context of the banking industry was provided. In this next section, the research issues are discussed in detail. Specifically, the discussion is organised as follows:

sub-section 2.3.1 discusses the perceived relative advantage and the tendency to adopt Internet technology;

sub-section 2.3.2 discusses the perceived organisational performance and the tendency to adopt Internet technology adoption;

sub-section 2.3.3 discusses the perceived customer/organisation relationship and the tendency to adopt Internet technology; and

sub-section 2.3.4, discusses the perceived ease of use and the tendency to adopt Internet technology.

2.3.1 Perceived Relative Advantage and the Tendency to Adopt Internet Technology.

Introduction

Previous IT/IS diffusion literature (Tornatzky and Klein, 1982; Rogers, 1995; Moore and Benbasat, 1991) has highlighted the fact that the importance of relative advantage in determining the adoption of new innovation, e.g., Internet technology. Rogers (1995) indicated that the rate of adopting new innovation is related to perceived relative advantage. Therefore, relative advantage is one of the important constructs in this investigation.

According to Rogers (1995, p. 15) relative advantage refers to "... the degree to which an innovation is perceived as better than the idea it supersedes". This means that if a bank manager perceives that Internet technology offers advantage over traditional ways of performing bank transitions and that it would enable the bank to outperform rivals in the industry then he/she would have the tendency to adopt Internet technology. Moore and Benbasat (1991) indicated that this construct is similar in notion to the perceived usefulness identified by Davis (1986) in TAM.

Empirical studies (Tornatzky and Klein, 1982; Moore and Benbasat, 1991; Adams et al., 1992) also supported the importance of this construct in a general setting. Other empirical studies (Tan and Teo, 2000; Brown et al., 2004; Polatoglu and Ekin, 2001) were conducted in the banking industry and found support for this construct.

These studies investigating the influence of relative advantage on the adoption of innovation indicate that Internet technology adoption has the potential to affect the ability of the bank to compete in the industry. Therefore, the researcher of this study expects that if a bank manager perceives that Internet technology could enable the bank to offer convenient banking services, innovative ideas, and better management of banking services then he/she would have the tendency to adopt Internet technology.

The issues associated with perceived relative advantage and the tendency to adopt Internet technology in the banking industry are explored below in order to broaden our understanding as well as to utilise these issues in guiding the interviews and to probing the issues deeply.

Convenience of Services and the Tendency to Adopt Internet Technology

The importance of convenience of services as a measure of relative advantage in the context of Internet technology in the banking industry is discussed in detail below.

In e-commerce, Cameron (1999) highlighted the fact that the convenience of shopping at any time is important because customers can save time spent contacting organisations. Hannon (1998) also showed that convenience of shopping in e-commerce from home or office is also important because customers can search the web for products/services and information from any location in the world.

Martin (1998, p.33) summed up the notion of convenience by stating "Despite security issues and a lack of industry standards, e-banking is the best way for smaller companies to combine convenience, top-tier financial service and cash management". The author argued that small business clients (or small corporate businesses) have been ignored in Internet banking activities. He suggested that banks should also focus on offering convenient banking services to small corporate business clients by enabling them to make and receive payments, monitor accounts at any time, invest overnight cash in money markets as well as issue letters of credit on the Internet. Indeed, the convenience of utilising banking services on the Internet is important to all customers in the market.

Interestingly, Brown et al. (2004) indicated that offering convenient banking services through the Internet would enable banks to gain advantage by being different in the industry.

In the banking industry, Tan and Teo (2000, p. 9) indicated that Internet banking services "... allow customers to access their banking accounts from any location, at any time of the day, it provides tremendous advantage and convenience to users". They believe that banks can gain advantage by providing banking services to their customers without having to contact banks for any queries from anywhere and at any time e.g., 24-hour banking services. This means that banks can offer convenience to their customers by allowing their customers to do banking transactions electronically (or online) without having to leave home or office and at any time.

Joseph et al. (1999) investigated the role of distribution channels in the Australian banking industry and their impact on banking services delivery, and argued for effective electronic distribution channels in that industry. They identified three alternative distribution channels used by customers: (1) automatic teller machine (ATM); (2) telephone; and (3) Internet banking. Their criticism was that customers are not satisfied with the technology-based service distribution options. In their study, six variables were identified: (1) convenience/accuracy; (2) feedback/complaint management; (3) efficiency; (4) queue management; (5) accessibility; and (6) customisation. The theoretical underpinning of their study was whether or not these six variables could affect the delivery of banking services and customer satisfaction. From an analysis of 300 responses obtained from a survey, they reported that perceived convenience/accuracy was one of the important factors.

In another study Thornton and White (2001) examined customer orientations and usage of financial distribution channels in Australia. The aim of their study was to examine the relationship between customer usage and attitude towards channels of distribution in the financial sector. They identified seven dimensions of customers' attitudes toward financial distribution channels, namely: (1) convenience; (2) service; (3) technology; (4) computers; (5) change; (6) knowledge about methods of accessing money; and (7) confidence in using electronic banking. Their study compared these attitudinal dimensions across the seven alternative distribution channels used by financial customers in Australia: (1) human tellers; (2) automatic teller machines (ATM); (3) electronic funds transfer at the point of sale (EFTPOS); (4) credit cards; (5) cheques; (6) Internet banking; and (7) telephone banking. They argued for differentiated distribution channels for the banks to be able to compete. Their criticisms were that deregulation in the financial market led to no protection for market share and profits. The theoretical underpinning of their study was whether or not relationships exist between customers' attitudes and their usage of

distribution channels in the financial sector. From an analysis of mail survey responses of 801 customers who used financial distribution channels, they found that convenience was related to the usage of the financial distribution channels in the Australian financial sector.

Innovation of Ideas and the Tendency to Adopt Internet Technology

The discussion related to innovation of ideas as a measure of relative advantage in the context of Internet technology in the banking industry is explored in detail below.

King and Teo (1996) indicated that the firms that utilise IT/IS for innovation have gained a favourable image (or reputation) and hence increased their value in the industry more than those firms that did not do so. This suggests that a bank has a potential chance to improve its image (or reputation) in the industry if it utilises IT/IS for innovation. The authors also suggested that the firms that do not seek leadership in the industry would be reluctant to utilise the IT/IS for innovation or to be unique. In their empirical investigation the authors found that the utilisation of IT/IS for innovation is important.

This notion is also supported by Joseph et al. (1999) who claimed that banks could improve their image in the industry through technological innovation.

On the other hand, Al-Hosini (2000) examined the utilisation of the World Wide Web for decision-making in a developing country, namely, the United Arab Emirates (hereafter UAE). The aim of his research study was to investigate the relationship between organisational culture and the tendency to adopt new IT. Other researchers (Davis et al., 1989; Rogers, 1995) studied the adoption and usage of IT in the developed countries in general. However, Al-Hosini examines the adoption and utilisation of Internet technology by managers for decision-making in the developing country of Dubai, one of the UAE states. The study compared dimensional characteristics of innovation for firms that have Internet services and firms that do not have Internet services. The five dimensions of innovative organisational culture examined included: (1) leadership; (2) ownership; (3) norms

for diversity; (4) continuous development; and (5) consistency. The theoretical underpinning of this study was whether or not organisational culture was positively related to the adoption of Internet technology. From an empirical analysis of 128 company managers, Al-Hosini found that innovative organisational culture in Dubai was unrelated to the adoption of new IT.

The authors of this study (Ruyter et al., 2001) also examined customer adoption of electronic services. They argued that organisational reputation is associated with electronic service usage. From an analysis of 202 responses, they reported that organisational reputation was associated with electronic service usage.

Management of services and the Tendency to Adopt Internet Technology

Management of services as a measure of relative advantage in the context of Internet technology in the banking industry is discussed in detail below.

Tan and Teo (2000, p. 9) stated that Internet banking service "... gives customers greater control over managing their finances, as they are able to check their accounts easily". They associated management of banking services with perceived relative advantage, and concluded that better management of banking services is an advantage for banks in the industry.

On the other hand, Joseph et al. (1999) highlighted the fact that the importance of management of banking services from the perspective of the banks. They suggested that monitoring of customers' feedback and complaints on a regular basis would ensure better management of banking services. They indicated that knowledge about customers' parameters would enable banks to allocate resources efficiently. They suggested that if banks could manage their banking services efficiently, the chance of maintaining consistent quality of services would be greater. This means that if they could respond to customers' feedback and solve customers' complaints the banks would be able to standardise solutions and hence achieve consistent quality services. Moreover, the authors indicated that Internet technology enables banks to standardise banking services and hence consistency could be achieved across quality

of banking services. They also indicated that customers would have greater control of their banking transactions if they were in-direct contact with Internet banking.

In support of this notion, Wisner and Corney (2001) investigated banks' customers' feedback by comparing the traditional distribution channel and the Internet distribution channel in the USA. They argued that implementing competitive Internet technology strategy in the banking industry is crucial due to the competitiveness of the industry. They suggested that

> Collecting and monitoring customers feedback allows firms to assess and upgrade their service and product capabilities as needed to maintain and improve competitiveness. Information gleaned from customers [sic] suggestions and complaints can also be used for benchmarking purposes, to form the basis for long term planning, and to allow firms to direct their continued improvement efforts in a more efficient and effective manner (Wisner and Corney, 2001, p. 240).

However, the question is how banks in Australia and Oman can maintain existing customers as well as motivate new customers to bank online.

Wisner and Corney indicated that banks could protect their market share in the industry by focusing on ways to understand customers' needs and expectations through the development of an effective customer feedback system. They argued strongly that if banks provided a full banking service on Internet, customers would be de-motivated to switch to another service provider due to the great effort of switching. They suggested that customers' feedback has the potential to improve the level of banking services in the industry. The authors recommended that banks determine the gap between actual delivery of services and customers' expectations in order to improve the level of service. They believe that feedback from customers and employees is important in problem solving and hence in improvement in the quality of service. This, of course, indicates that the process of monitoring and evaluating the level of service to improve the quality of service is a continuous one.

From an analysis of feedback capabilities of 30 traditional banks and credit unions and 82 Internet bank sites, Wisner and Corney revealed that many banks were not utilising feedback as a way of improving the level of service. They indicated that part of the reason lies in the utilisation of basic methods to manage the huge collection of feedback and complaints, which require great effort and skill.

Summary of the major finings from the Extant Literature

The major findings from the extant literature relating to perceived relative advantage are summarised in Table 2.1.

Table 2.1: Major findings from extant literature related to perceived relative advantage

Perceived Relative Advantages	**Identified literature**
Convenience of services	Cameron, 1999; Hannon, 1998; Martin, 1998; Brown et al., 2004; Tan and Teo, 2000; Joseph et al., 1999; Thornton and White, 2001.
Innovation of ideas	King and Teo, 1996; Joseph et al., 1999; Al-Hosini, 2000; Ruyter et al., 2001.
Management of services	Tan and Teo, 2000; Joseph et al., 1999; Wisner and Corney, 2001.

Table 2.1 shows the identified literature review of important issues relating to perceived relative advantages. A summary of major findings from the above literature review is presented below:

Convenience of services

- Convenience of available service (e.g., 24-hour banking services)

- Convenience of location (e.g., anywhere, or global).

Innovation of ideas

- Image or reputation

Management of services

- Feedback/complaints
- Quality of services

The purpose of this summary of major findings is to develop a list of focused issues that could assist the researcher to probe deeper in the semi-structured interviews.

2.3.2 Perceived Organisational Performance and the Tendency to Adopt Internet Technology

Introduction

Perceived organisational performance refers to a manager's perception that Internet technology adoption would improve a bank's performance. If Internet technology could improve performance then the bank would be able to gain advantage in the competitive environment.

Many authors (Kettinger et al., 1994; La and Kandampully, 2002; Soliman and Janz, 2004) believe that IT/IS has the potential to affect organisational performance. For example, Kettinger et al. (1994, p. 32) highlighted the importance of organisational performance in a competitive environment by stating that

> ... competitive use of IT has the potential to provide easier access to markets; to change products through differentiation; to provide cost efficiencies; and to change the nature of a firm's industry.

This indicates that if business organisations wished to be successful on Internet, they would need to rethink their profitability, market environment and employee productivity. Kettinger et al. (1994) examined the effect of strategic IS on sustainability and performance. From a content analysis of 60 cases of identified strategic systems, they reported that the establishment of strong IT/IS base and fund to support it financially are important for improving Organization's performance and its sustainability.

Dennan and Kenedy (2003) also examined the relationship between Internet use and perceived performance in two different types of services (professional health services and retail services). From an analysis of 262 responses, they reported that Internet technology significantly influenced perceived performance.

Bhuian (1997) examined the relationship between market orientation and banks' performance in the Saudi Arabia[4] banking industry. The author argued that unlike most developed countries, developing countries are experiencing rapid growth in the markets. However, the author indicated that this growth would probably continue until markets are matured and become competitive. Based on an analysis of 92 responses obtained from managers of 12 banks with a total of about 1,200 branches across the country, Bhuian's research revealed that market orientation is not related to a bank's performance. A possible reason for these phenomena, the author indicated, was that banks might be concerned about other performance measures such as quality of services.

Sullivan (2000) examined specifically Internet technology adoption and its effect on a bank's performance. This study highlighted the fact that Internet technology has the potential to change how a bank operates in the industry. Indeed, if it could affect the way a bank operates in the industry it would also affect its performance in the industry. In support of this notion Sathye (1999) observed that most Australian banks shifted most of their banking services on to Internet to gain the advantage of the global banking market. Sullivan (2000) stressed the importance of understanding how Internet technology is adopted in the banking industry. His aim was to determine whether or not Internet technology has an effect on bank's performance. From an analysis obtained from a sample of banks located in Tenth Federal Reserve District, in the state of Kansas City, he reported that Internet technology has an influence on bank's performance.

The above studies examining the relationship between IT/IS adoption and organisational performance indicate that Internet technology can affect a bank's performance. Therefore, the researcher of this study expects that perceived organisational performance would indicate a tendency to adopt Internet technology in the banking industry.

[4] A neighbouring country of Oman

In an attempt to examine (or measure) perceived organisational performance and the tendency to adopt Internet technology in the banking industry, the following discussion addresses the importance of organisational performance in terms of profitability, market environment and employee productivity.

Profitability and the Tendency to Adopt Internet Technology

The following discussion focuses on the importance of profitability as a measure of organisational performance in the context of Internet technology in the banking industry.

The Internet technology is important because it can improve business performance in business organizations because it has the potential to provide relative advantage e.g., generation of additional profit. For example, a bank could improve its profitability through increased sales return and reduce costs on Internet.

King (2001) focused on the impact of Internet technology on organisational performance. He argued that Internet technology has the potential to affect the ways business organisations conduct their business. He justified his argument by stating that "Those who are proactive in utilising the Internet will find ways of reducing costs, improving productivity, and contributing to corporate performance" (p.15).

Lim et al. (2004) conducted a meta-analysis study on the relationship between IT investments and organisational performance. They argued that previous studies examining IT investments return have shown inconclusive results. They questioned the appropriateness of measuring organisational performance. From an analysis of 3,883 subjects obtained from prior studies, they found strong support for return on IT investments.

Shin (1997) examined the impact of IT/IS on organisational performance. The author focused on IT/IS adoption and its influence on improving coordination costs and hence improving sales revenue. Coordination costs incurred in an organisation were defined as "... the costs involved in acquiring and processing information for decision-making, accounting, planning, monitoring, and control process" and

coordination costs incurred in marketing as "... the costs of searching and selecting suppliers, and negotiating and enforcing contracts" (Shin, 1997, p. 134). From an analysis of 232 responses obtained from a survey, Shin reported that reduced costs and increases in sales revenue were associated with IT/IS investments.

Rai et al. (1997) also examined IT investments and their role in improving organisational performance. In their study they identified different measures of performance including firm output (e.g., value and sales); business performance (e.g., return on assets and return on equity); and staff productivity (e.g., labour and management). From an analysis of 497 responses (obtained from *Information Week Magazine* and Compustat database), they reported that IT/IS investments were strongly associated with firm output and weakly associated with business performance and productivity. They explained that IT investments have different effects on organisational performance.

Interestingly, Tam (1998) also examined the impact of IT investment on organisational performance. The theoretical underpinning of his study was whether or not IT/IS investments had any effect on organisational performance in the developed countries. From an analysis of 106 responses obtained from a survey of firms operating in Hong Kong, Singapore, Malaysia, and Taiwan, Tam reported that IT/IS investments had no significant influence on shareholder's return and market value.

On the other hand, Soliman and Janz (2004) examined the adoption of inter-organisational information systems in organizations. They argued that in a competitive environment business organisations face major pressure from trading partners and competition to change their distribution channel. In their study, they highlighted the fact that in a competitive environment, cost (e.g., communication cost, labour, and material) has the potential to affect organisational performance. They noted that return on investment (e.g., initial and operational) is difficult to realise in the short-term because, over time, rivals could figure out how to improve quality and lower prices. From a survey analysis, Soliman and Janz reported that pressure from trading partners, pressure from competitors, cost, reliability, security, scalability, complexity, support from upper management, and trust, were important factors in determining Internet technology adoption.

Examining the relationship between the e-commerce adoption and organisational performance another study (Scupola, 2002) found that cost is not an important factor in the e-commerce adoption decision.

A study by King and Teo (1996, p. 46) emphasised the importance of economies of scale in improving profitability by stating that

> Since investments in IT are usually costly, economies of scale can make the strategic use of IT more feasible. The presence of an extensive distribution network can result in greater economies of scale for the strategic use of IT as well as making the use of IT more important for coordination and control.

The above studies suggest that Internet technology has the potential to affect a bank's performance (e.g., reduce costs and increase sales revenue). However, Reichheld and Schefter (2000) emphasised that if business organisations want to cover the cost of acquiring IT/IS they would need to focus on long-term customer relationships. This raises the question of how the banking industry could improve its performance on Internet.

Indeed it is not sufficient to rely only on IT to improve firm profitability but rather to focus on business strategies as well, if business organisations wish to be successful in the industry.

Accordingly, Lavender (2004) also emphasised the importance of considering intangible benefits/costs in the IT/IS investment decisions in the banking industry, whilst he argued that to sustain profitability on the e-commerce is very difficult due to the competitiveness of the Internet market. He suggested that business organisations would need to consider quality of services and marketing strategies in order to be successful in e-commerce.

Anandarjan and Wen (1997) evaluated IT investment and its effect on organisational performance. They highlighted the fact that business organisations focus on IT in order to improve performance, and argued that business organisations are not getting what they expect from IT investments. This suggests that benefits are not realised from IT/IS investments. They noted that most organisations are concerned about evaluating benefits/costs to determine whether or not IT/IS projects are viable. Moreover, they added that IT/IS projects carry risks, which usually appear later on. Interestingly, they noted that due to the uncertainty of IT/IS projects, risk adjustments do not reflect actual risks during the life of IT/IS projects. This indicates that in a competitive environment the risk is even higher. Also, they argued that the evaluation of IT/IS benefits and costs are inappropriate because of the sophistication of IT/IS projects. Part of the sophistication, they indicated, the difficulty of identifying hidden benefits/costs associated with IT/IS investments.

Hence, the findings of Anandarjan and Wen indicate that most decision makers in the banking industry are concerned about tangible benefits/costs when they decide to adopt Internet technology. Perhaps it would be valid here to mention that the authors stressed that intangible benefits, such as customer satisfaction and organisational productivity, are among the concerns ignored in IT/IS decision-making. In their study they suggested that intangible benefits/costs are very helpful in understanding IT/IS influence on organisational performance. Therefore, it is expected that a bank manager would be more concerned about the tangible benefits/costs in the organisational performance.

Brynjolfsson and Young (1997) examined the intangible benefits/costs associated with IT/IS investments. They argued that most business organisations do not identify these hidden intangible benefits/costs (e.g., service quality and customer satisfaction). They highlighted the fact that these intangible benefits/costs do not appear on an organisation's conventional balance sheet. From an analysis of 1,031 responses (obtained from the database provided by Computer Intelligence Corporation in the USA), Brynjolfsson and Young found that intangible assets provided explanation for high market valuation. This indicates that the banks that adopt Internet technology could improve their market value in the industry.

Kettinger et al. (1994), however, argued that the probability of realising long-term investments on Internet is very slim, because competitors can easily copy (e.g.,

investments, services, Internet technology), thus making it easy for customers to switch to another bank. They suggested that in a competitive environment strategic IT/IS investment decisions are risky due to heavy investments and the length of time over which these investments are realised. In fact, however, Internet technology offers business organisations many advantages including cost reduction.

Ramsey and Smith (1999) conducted an empirical study on different alternative distribution channels and the implications for both customers and bank profitability in the banking industry in Australia. They identified five alternative distribution channels in their study: (1) branch banking; (2) Internet banking; (3) phone banking; (4) ATM; and (5) home personal computing (PC) banking. The aim of their study was to explore the most profitable distribution channel and then redirect customers to use this channel. Their study focused on three main areas: (1) user channel preferences; (2) service quality; and (3) profitability. Ramsey and Smith argue for large-scale assessment of all distribution channels used by the banking industry. Their main criticism was that the wholesale banking area does not have reliable measures to support decision-making.

From an empirical analysis of 294 responses, Ramsey and Smith found that:

(1) the most preferred sales and transaction channel was bank branch and the least preferred was Internet;

(2) the two most used channels were ATM and EFTPOS;

(3) the bank branch was rated third after ATM and EFTPOS;

(4) the most profitable channel was sales channel and the least profitable was the transaction channel.

Ramsey and Smith's survey was carried out on two groups of customers: (1) bank customers were surveyed to measure bank customer's channel preference in the retail banking area; and (2) Intermediary customers also were surveyed to measure perceived service quality in the wholesale banking area. The authors recommended that banks increase the use of cost-efficient channels such as Internet and phone banking by focusing on two groups of customers: (1) customers who are unwilling to use these cost-efficient channels; and (2) customers who do not give importance to available banking channels. The reasons for rating the Internet banking channel poorly have been cited as lack of accessibility and security concerns. The authors highlighted the fact that consumers were already embracing advanced distribution channels technology.

Market environment and the tendency to adopt Internet technology

The following discussion focuses on the importance of market environment as a measure of organisational performance in the context of Internet technology in the banking industry.

King and Teo (1996, p. 46) indicated that

> Favourable market growth, favourable economic growth and favourable environmental change in industry make it easier to increase investment in IT since resources are more readily available. Conversely, the lack of a favourable environment may make the firm less willing to invest in IT applications.

This indeed suggests that if there is a growing need among banking consumers to communicate banking service through Internet then banks would be motivated to invest on Internet technology.

Singh (2004) examined Internet technology in the South African banking industry. He highlighted the fact that the Internet market potential is significant because banks have the opportunity to target most segments in the industry (e.g., locally and internationally). Indeed, Internet offers banks the opportunity to have their own online presence. In his study, he argued that banks have the potential to expand their markets virtually because of the Internet convenience (e.g., services and information can be accessed any time and anywhere). The aim of his study was to investigate why University employees did not bank online. In his study, he focused on the consumer's perspective in order to understand the market potential of an online banking from the customer's point of view. Specifically he focused on issues including: security, user friendliness, an online help and incentives to bank online. He indicated that Internet banking has the potential to grow and the market is lucrative for new entrants. However, he goes on to say that even though there is a

potential market for Internet banking, banks need to focus on satisfying customers if they want to be successful on Internet.

This means that to enter the market is easier than to sustain it due to the boundary-less or restriction-less characteristic of Internet. Singh suggested that banks would need to address the issue of customer satisfaction in their online banking and indicated that if banks wish to generate additional revenues, improve customer service, expand market, and increase cost saving they would need to have an online presence. However, he also indicated that the challenges of expanding an online market include: an online payment security, and customer service. It seems that if banks wish to sustain and expand their online market they need to focus on customer relationship.

From an analysis of 369 responses obtained from an online survey, Singh reported that Internet banking has the potential to grow. This notion is supported by Kettinger et al. (1994) who highlighted the fact that business organisation leaders invest extra resources to secure their market share in the industry. They claimed that by considering switching cost, business organisations would ensure customers were accustomed to their IS/IT user friendliness and user training. This means that it is not enough just to put the services on Internet but an organisation needs to offer unique services to make it costly for customers to switch to another bank. The authors (Kettinger et al., 1994; Clemons, 1986) believed that market share has the potential to affect performance through unique services and process. This can be captured from Carr's (1997) study, suggested that Internet technology offers business organisations the opportunity to expand their market share through customised web sites by offering unique products and services.

Consequently, the above studies suggest that uniqueness and availability of online services are important for expanding and maintaining customer base. If banks were unable to differentiate their banking services and process on Internet their expansion and maintaining of their customer base would be questionable.

In e-commerce field La and Kandampully (2002) studied the electronic retailing and distribution of services. They highlighted the fact that e-commerce offers business organisations market potential to reach most customers locally as well as

internationally. They argued that business organisations would be successful in the e-commerce market if they focused on certain traditional values. In their study, they identified three major issues, namely: (1) market segmentation; (2) customer communication; and (3) customer satisfaction, trust and loyalty.

In their study, La and Kandampully argued that although e-commerce has the potential to expand, most of the challenges on e-commerce are not yet resolved. They noted that if business organisations want to be successful in e-commerce they would need to focus on creating values for customers. They believe that the human element can play a major role in improving organisational performance on Internet. This means that the notion branch banking will be eliminated and employees replaced, that by introducing the Internet technology is not correct, because branch banking and people are required to build customer relationship through unique services in order to expand the market. In their study La and Kandampully argued that

> ... emerging Web centric business models offer numerous opportunities to firms while, at the same time, raising the bar with regard to customer expectations, speed, comparability, and price. The global marketplace makes it imperative that businesses improve their services and compete with each other, regardless of their size (p. 101).

This raises the question of how banks can expand their market without harming their business performance on Internet. They suggested that business organisations would need to consider several alternative strategies, including: services/products; distribution channels; and cost. In addition that business organisations would need to address customer value issues including: service transitions time, customer services, tailored solutions to meet different needs of sophisticated customer. In their observation, La and Kandampully also noted that many business organisations prefer to be followers in the industry to avoid risks, and they argued that the opportunity of being a pioneer in the industry would be lost if the market developed as expected. Despite these benefits of the Internet, they acknowledge that sustaining a competitive advantage in the industry is very difficult in a competitive environment. As part of the `difficulty they indicated that rivals can easily copy services, designs, systems and ways of satisfying customer's needs. To deal with this difficulty, La and Kandampully suggested that business organisations should focus continuously on innovations to protect their investment against rivals on

Internet. Conclusion of their study emphasised the importance of overall customer satisfaction and also indicated that customer satisfaction is closely associated with perceived service quality.

Porter (2001) also indicated that developing and sustaining competitive advantage would require business organisations to focus on developing and sustaining customers' value on Internet.

Arnott and Bridgewater (2002) studied Internet interaction and implications for marketing. They also believe that business organisations can expand their markets significantly. They have proposed that Internet offers great potential for business organisations to communicate their services/products to their customers globally. Specifically they stated that

> The Internet creates the potential to interact with customers on a global scale. This interaction may, in turn, allow marketers to target their customers on a one-to-one basis and to build brand loyal relationship (p. 87).

To recapitulate, this means that communication with customers online is very important for the development of the Internet bank market. In their study, they disclose that as business organisations develop their market online the level of online service sophistication increases. This information should reduce the fear of replacing the human element with Internet but also this suggests that banks would have to educate their employees and customers to meet the level of service sophistication. From an analysis of 78 responses, Arnott and Bridgewater reported that successful market potential is associated with Internet communication. This shows that if banks want to expand their banking market successful on Internet they would need to focus on effective communication with their customers.

Hamill and Gregory (1997) studied Internet marketing in the internationalisation context of UK small-medium enterprises (SME). They argued that the Internet market in the internationalisation context has the potential to expand for SME due to

the benefits gained from an online market research (e.g., cost saving in international marketing). This has implications on the decision to adopt Internet technology because most banks those in Oman and Australia are now rethinking their strategies and are looking to globalise their banking operation.

However, Daniel (1999) highlighted the fact that the importance of making a decision to adopt Internet even though Internet technology is undergoing major changes.[5] He identified the organisation and market factors that have the potential to affect the adoption of Internet banking services: (1) culture of innovation; (2) market share or strength; (3) restrictions and limitations; (4) customer acceptance; and (5) vision of the future. He also highlighted the fact that the possibility of developing strategies to reduce the influence of these factors on Internet technology adoption. The aim of his study was to assess the status of Internet retail banking in the UK and the Republic of Ireland. Daniel argues that there was insufficient research material on factors that affected the adoption of Internet banking services in the UK and the Republic of Ireland. From an analysis of 44 retail banks and building societies, Daniel found that the organisation's vision of the future; customer acceptance and organisational culture of innovation the most important factors. The least important factors affecting the provision of Internet banking service were organisational restrictions and limitations and market share or strength. Daniel concluded that Internet distribution channel is expected to grow in the future and the decision to adopt such service will depend mostly on an organisation's vision of the future while consumer demand for better access, function and service at lower prices will increase.

Employee Productivity and the Tendency to Adopt Internet Technology

The following discussion focuses on the importance of employee productivity at the individual level as a measure of organisational performance in the context of Internet technology in the banking industry.

[5] Daniel (1999) organised his material according to Internet technology and the development of new offerings to point out that the development of Internet banking services will depend on the organisation and market forces.

Dedrick et al. (2003) conducted a meta-analysis study on the influence of IT investments on organisational performance. They argued that previous studies examining the relationship between IT investments and organisational performance have mixed results. They question the method used to measure this relationship. In their model they refer to labour productivity as "... a measure of the efficient use of resources to create value" (p.4). Dedrick et al. indicate that the organisation that is more productive than its rivals would generate more profit in the industry. This suggested that a bank that utilised fewer resources than rivals to produce the same banking services on Internet would outperform rivals in the industry. Dedrick et al. added that these business organisations would be able to reduce costs and improve quality and hence customers would not mind paying a premium price for the service. However, they indicated that to sustain profits would be difficult because it would require a business organisation also to sustain the level of productivity. This also suggested that in the long-term, banks would face a major challenge in sustaining the level of productivity on Internet because competitors could easily copy, e.g., services, processes, and systems. They went on to say that most organisations adopt IT/IS to automate process and improve quality of information. For example, automation of processes enables both banks and customers to process a bank transaction (e.g., in a shorter time) and improved quality of information enables a bank manager to make better informed decisions (e.g., manage bank resources efficiently). Dedrick et al. suggested that when a process is redesigned well (e.g., it meets the expected level of productivity) then these improvements could be achieved.

Cucuzza and Cherian (2001) focused on the impact of Internet technology on organisational performance. They indicated that Internet technology could radically change business organisations (e.g., business processes are becoming standard and marketplaces are emerging). They suggested that new skills would need to be developed in order for business organisations to be successful.

The Cedar group consulting firm (2004) survey reported that Internet could play a major role in transforming the workplace to enhance productivity, such as reducing operational cost and improving employee relationships through improved service delivery. The investigators noted that as the transformation progressed in the workplace the level of sophisticated services also increased.

Lucas (1975) also examined the relationship between IT/IS use and individual performance. He argued "Heavy investments are made in information systems, often in the expectation that their use will result in improvements in performance" (p. 908). From an analysis of 400 responses obtained from a survey, Lucas found that IT/IS use affected individual performance related to decision-making and problem solving. In his conclusion, he acknowledges the complexity of understanding this type of relationship.

Ramakrishna and Lin (1999) examined the perceptions of the role of IT/IS in an organisation. They highlighted the fact that IT/IS has the potential to affect the way business organisations operate and compete in the industry. They focused on how these perceptions affect the employment of IT capabilities in an organisation. Successful adoption of IT/IS depends on the quality of communication among employees within an organisation and between an organisation and customers, they argued. From an analysis of 200 responses, Ramakrishna and Lin found association between IT/IS adoption and improved communication with an organisation and its customers. This implies that if a bank perceives that communication among employees within a bank and its customers could be improved then it would adopt Internet technology.

Poston and Gr*a*bski (2000) examined the impact of enterprise resource planning systems (ERP) on firm performance. They focused on issues including: cost reduction and improved informed decision-making by providing decision makers with accurate and reliable information to make informed decisions. The theoretical underpinning of their study was whether or not ERP systems have the potential to influence costs and informed decisions. From an analysis of 50 responses, Poston and Gr*a*bski showed that firms were able to automate their processes and hence improved their informed decisions. However, they indicated that the communication cost was reduced, the cost of acquiring skilled ERP systems engineers was increased. This suggests that the level of skilled employees and customers needs to be raised on the Internet.

Bres*e*nahan et al. (2002) examined the effect of IT on the organisation workplace and its implication on the level of skills. From an analysis of 300 responses, they revealed that IT has the potential to affect the process and hence the skills level. This implies that the adoption of Internet technology has implications for how a business

organisation communicates internally and with their customers and suppliers (or partners) as well as how they respond to their customers.

Clemons and Row (1993) also suggest that IT/IS has the potential to affect the level of coordination and cooperation among buyers and suppliers. This also supports the notion that IT/IS could have an effect on the level of communication and organisational response to customers.

Indeed, Dedrick et al. (2003) highlighted the fact that most business organisations are focusing their attention on improving their performance by improving quality and productivity. He argued that IT/IS could improve quality and productivity of an organisation through customisation of services to meet the needs of customers. This indicates that Internet technology could enable banks to develop and distribute their range of banking services.

Other authors also indicated that IT/IS could enable business organisations to offer greater customisation and flexibility of services to their customers (e.g., Fox, 2001). For example, on the Internet, business organisations can offer their customers the ability to customise their own services according to their needs.

Indeed, organizations that offered customised, flexible and accessible banking services to Internet customers would enable their customers to become more productive and still have the time to serve other customers who need personal banking services (or specialised banking services) that could not be standardised on Internet.

Summary of the major findings from the Extant Literature

The major findings from the extant literature relating to perceived organisational performance are summarised in Table 2.2.

Table 2.2: Major findings from extant literature related to perceived organisational performance

Perceived organisational performance	Identified literature
Profitability	King, 2001; Lim et al., 2004; Shin, 1997; Rai et al., 1997; Tam, 1998; Soliman and Janz, 2004; Scupola, 2002; King and Teo, 1996; Reichheld and Schefter, 2000; Lavender, 2004; Anandarjan and Wen, 1997; Brynjolfsson and Young, 1997; Kettinger et al., 1994; Ramsey and Smith, 1999.
Market environment	King and Teo, 1996; Singh, 2004; Kettinger et al., 1994; Clemons, 1986; Carr, 1997; La and Kandampully, 2002; Porter, 2001; Arnott and Bridgewater, 2002; Hamil and Gregory, 1997; Daniel, 1999.
Employee productivity (at the individual level)	Dedrick et al., 2003; Cucuzza and Cherian, 2001; Cedar group consulting firm, 2004; Lucas, 1975; Ramakrishna and Lin, 1999; Poston and Grabski, 2000; Bresenahan et al., 2002; Clemons and Row, 1993; Fox, 2001.

The important issues related to perceived organisational performance are presented in Table 2.2. A summary of major findings from the above literature review is shown below:

Profitability

- Reduction of communication costs
- Technology investment cost.
- Economies of scale

Market environment

- Expand/sustain customer base

Employee productivity

- Business efficiency

The list will serve as a guide for the research design in Chapter four.

2.3.3 Perceived Customer/Organisation Relationship and Tendency to Adopt Internet Technology

Unlike the Omani banking industry, the Australian banking industry is undergoing a major change in the way banks distribute their banking services to their customers due to competitive pressure (Sathye, 1999). Introducing change in the banking industry to respond to the competitive market pressure means that banks have to replace their traditional branch banking distribution channel with an electronic banking distribution channel. However, the implementation of these changes will require careful understanding of customer retention and satisfaction (Yen and Gwinner, 2003). This means that the customer/bank relationship could be affected by the Internet technology adoption. Therefore, perceived customer/bank relationship can be defined here as the degree to which an organisation believes that adopting Internet technology would enhance the customer/organisation relationship.

McKenzie (2001) highlighted the fact that business organisations can improve their business performance by developing a good business relationship with their customers. Also, Julian and Ramaseshan (1994, p. 29) summarised these points, as "In the competitive environment of retail banking there is constant pressure to innovate and develop new ways to improve customer service". E-commerce plays a major role in the economy by enabling sellers and buyers to create economic value through exchange of information, goods/services, and payments (Bakos, 1998). The importance of the customer relationship potential in e-commerce has been stressed by many authors (Kalakota and Whisnton, 1996; Bauer et al., 2002; Romano and Fjermestad, 2003), and specifically in the banking industry (Durkin and Howcroft, 2003). However, the question here is how would a bank enhance customer relationship through Internet technology adoption?

Bauer et al. (2002) studied customer relationship in e-commerce and identified three key variables of customer relationship, namely: (1) customer trust; (2) customer commitment; and (3) customer satisfaction.

Customer Trust and the Tendency to Adopt Internet Technology

The importance of customers trust in the Internet technology adoption is discussed below.

According to Mayer and Davis (1995, p. 712) customer trust is the

> ... willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.

From the point of view of a bank manager, this means that customer trust (in the electronic channel for delivering banking services, e.g., Internet technology in the banking industry) is the willingness of the customer to accept the risk by putting his/her self into a vulnerable position. Mayer and Davis (1995) distinguished clearly the difference between customer trust and trusting behaviour (e.g., the adoption of Internet technology in the banking industry) by stating that customer trust is the tendency to accept risk whereas behavioural trust is actually taking the risk. In their integrative model of organisational trust they assumed that the degree of customer trust would determine the likelihood of actually taking the risk. This suggests if a bank manager perceived that customer trust would be enhanced in the case of adopting Internet technology then the manager would take the decision to adopt Internet technology in the bank. Therefore, the likelihood that a manager would actually make the decision to adopt Internet technology in the bank is determined by his/her perception about how well customer/bank relationship would be enhanced if they adopt it. In evaluating the risk, Mayer and Davis (1995) suggested that if an individual (e.g., a bank manager) perceived that the level of customer trust would increase compared to the expected risk, then he/she would actually commence the customer/bank relationship (e.g., adopt Internet technology).

Likewise, Keen (1997) highlighted the fact that in order to extend electronic customer/business relationships organisations need to address the issue of customer trust in their relationship with the customer in their IS/IT application. This particular

issue has recently gained attention by IT/IS academic research (Gefen, 2000; Jarvenpaa et al., 2000). For example, Kimery and McCord (2002) examined customer trust in electronic retailing (e-retailing). They argued in their separate studies that business organisations lack customer trust on Internet because of issues of security and reliability of businesses on the web. In their study, Kimery and McCord identified three types of web assurances:

(1) Privacy assurance – to assure that merchants disclose and comply with privacy policies.

(2) Process assurance – to assure that merchants comply with business processes.

(3) Technology assurance – to assure that merchants employ secure and reliable technologies.

The theoretical underpinning of Kimery and McCord's study was whether or not relationships exist between third-party assurance seals, customer trust and online purchasing intentions. From an analysis of 622 responses, they found that customer trust was a major factor influencing the success of e-commerce.

Ruyter et al. (2001) examined customer adoption of electronic services in e-commerce. From an analysis of 202 responses, they reported that organisational reputation and perceived risk are the most important variable in customer trust.

More recently, Whitman (2004) examined the threats to information security. He argued that previous research studies lack understanding of threats as well as vulnerability inherited in the IS/IT adoption. The author highlighted the fact that most organisations offering services/products to their customers on Internet exposed their business to threats such as potential crime, abuse or misuse of information. Whitman added that these organisations increase "... the risk of substantial loss through unauthorised disclosure, modification or destruction of information." (p.48). The aim of Whitman's study was to identify and rank existing threats to IT/IS. He raised four questions, namely:

(1) What are the threats to information security;

(2) Which of these threats is the most serious?

(3) How frequently (per month) are these threats observed?

(4) Which threats require the highest expenditure?

From an analysis of 192 responses obtained from a survey of IT/IS professionals, Whitman reported the ranking of 12 threats to information security; however, the three most prevalent threats were reported in order of ranking:

(1) Software attacks (e.g., virus attacks).

(2) Technical software failure or errors.

(3) Act of human error or failure (e.g., failure to follow policy in system use or internal abuse of the net).

Whitman also reported that the threat of human error or failure was a serious threat because of its frequency. Meaning that the risk of potential loss would be higher internally (e.g., internal abuse of net) than externally within the organisation. In the conclusion Whitman recommended that organisations must address the issue of: (1) policy in information security; (2) security mechanisms (or controls); and (3) education, training and awareness programs.

Other authors (Gefen, 2000; Mauldin and Arunachalam, 2002; Liu et al., 2004) also conducted similar studies that examine the influence of customer trust on purchasing intention in e-commerce. From their analysis they found support for this relationship. These studies suggest that customer trust of an online vendor (e.g., an online bank) is very important to the behavioural intention (e.g., to adopt Internet technology in the banking industry).

The authors (Hoffman et al., 1999; Koved et al., 2001; Warrington et al., 2000) argue in their separate studies that Internet technology is still facing a major challenge in the area of customer trust because of security concerns. There is fear among customers that their private information (e.g., personal and financial details such as credit card details) will be disclosed to other parties, especially when buyer and seller have to exchange this information for processing transactions online

for the consumer would be increased. Gefen further argues that business organisations are not actually obeying the rules and fulfilling their promises towards the consumer. This suggests that the degree of customer trust would depend on how well an organisation obeys the rules and fulfils its promises towards the consumer. This also means that if consumers perceive that the vendor is not respecting the business (e.g., being honest in business conduct and having the ability to provide goods/service) then they would be more likely to shift vendor. From an analysis of 289 (MBA students) responses, Gefen reported that consumer's trust is a crucial factor for business organisation's success in the e-commerce.

More recently, Khalfan (2004) conducted a survey and semi-structured interviews to examine information security considerations in IS/IT outsourcing projects in Kuwait, one of the Gulf Cooperation Countries (hereafter GCC). From an analysis of 20 responses obtained from a semi-structured interview and 87 from a survey, Khalfan reported that security concerns have been one of the major issues in the IT/IS outsourcing projects decisions in the Kuwaiti environment.

Salisbury et al. (2001) examined perceived security and web purchase intentions. The factors they considered in their study were: ease of navigation, usefulness, web security and purchase intention. The theoretical underpinning of their study was whether or not the factors: ease of navigation, usefulness, and web security have influence on purchase intention. From an analysis of 253 responses, Salisbury et al. reported that security is a stronger influence on purchase intention than ease of navigation and usefulness of purchasing products.

Akkeren and Cavaye (1999) examined factors affecting Internet technology adoption by small businesses in Australia. From an analysis of three case studies, Akkeren and Cavaye reported that lack of business benefits, mistrust of the IT industry and lack of time are the major inhibitors to Internet adoption.

Chung and Paynter (2002) utilised a questionnaire survey to examine Internet technology in the banking industry in New Zealand. From an analysis of 184 responses, Chung and Paynter reported security to be a major inhibitor to Internet technology adoption in the banking industry.

Sathye (1999) studied the adoption of Internet technology in the banking industry from the perspective of the Australian consumer with the aim of investigating the factors affecting the adoption of Internet technology in the industry. His study looks at factors from a customer's perspective that could influence the adoption of the Internet banking service in Australia. The researcher identified six key constructs: (1) security of transactions; (2) ease of use; (3) awareness of Internet services and benefits; (4) cost of services; (5) resistance to change; and (6) accessibility of Internet that have the potential to affect the adoption of the Internet banking. The theoretical underpinning of this study is whether or not consumers' perceptions affect the adoption of Internet technology in the Australian banking industry.

The methodology used was based on an e-mail survey questionnaire. Sekaran (1992) highlighted the fact that the disadvantages of mail questionnaire – lower return rate, difficulty of clarifying doubts about getting a representative sample. Data were collected from 612 respondents with a response rate of 61%, out of which 23 questionnaires were discarded due to their poor quality. From an empirical analysis of the 589 individual and business clients, Sathye found that Internet security concerns and lack of awareness of Internet services and benefits were the major impediments to the adoption of Internet technology in the banking industry by Australian consumers. Indeed this study raised very interesting issues related to the customer/bank relationship, however, the focus of this thesis is from the bank manager's perspective.

Mols (2000) has conducted an empirical study on the adoption of Internet technology in Danish retail banking with the aim of examining the relationship between managers' perceptions and their expectations of the adoption of Internet banking in the Danish retail banking. His work builds on the general literature on Internet and marketing (e.g., Dannenberg and Kellner, 1998). Mols identified two perceptions: (1) Internet was an opportunity to open communication with customers; and (2) Internet was a threat to close communication with customers, with the potential to affect managers' expectations of adopting the Internet technology. The theoretical underpinning of this research was whether or not these perceptions affect managers' expectations to adopt Internet technology. Data was collected from 60/96 key managers in the Danish retail banks using a mail questionnaire methodology in the survey. From an empirical analysis of 60 key managers in the Danish retail banks, Mols found that the managers' perceptions were positively related to managers' expectations of adopting the Internet technology.

These above studies suggest that Internet can affect customer/bank relationship. Therefore, successful e-commerce is based on how well business organisations (e.g., banks) address security concerns in their IS/IT applications to ensure better customer trust (Koved et al., 2001). In an attempt to close the gap in the customer trust, third party assurance services responded to the issue by developing acceptable technological measures to assure trust in the e-commerce relationship (e.g., Salnoske, 1997; Kimery and McCord, 2002). Held and Bowers (2001) suggested that business organisations need to address security concerns on Internet continuously, through additional measures such as: learning; backups; secured database; firewalls; intrusion detection systems; cryptography; and private communications. Business organisations were facing difficulties in protecting their vital information from hackers and hence were not able to conduct their business on Internet.

Mukherjee and Nath (2003) examined customer trust in the context of Internet technology adoption in the banking industry in India. They identified objects to be trusted in the e-commerce application (e.g., Internet banking) as: the electronic channel and the bank. They argued that customer trust was affecting the adoption of the Internet in the banking industry. Other studies focused on customer trust in e-commerce in general but not on customer trust in Internet specifically in the context of the banking industry. Mukherjee and Nath explained that customer trust is developed between the parties involved by knowing each other over a period of time. By developing customer trust the bank can reduce concerns related to negative consequences such as customers switching banks. This implies that the degree of trust could change as the relationship develops between the parties (e.g., a bank and a customer) because they would get to know each other better.

Mukherjee and Nath focused on customer trust related to electronic channel (Internet banking) through which a bank offers its banking services to a customer. They identified three antecedents of trust as: (1) shared value; (2) Communication; and (3) opportunistic behaviour. They expected that these antecedents would influence customer trust and hence the adoption of Internet banking. The objects of trust were identified as: (1) customer trusts in e-channel as a medium for delivering banking services and (2) customer trusts in the bank. They defined shared value as "... the extent to which the bank and the customers share common beliefs on critical values like ethics, security, and privacy"; communication as "openness, speed of response, and quality of information"; and opportunistic behaviour as "... regulatory control and information asymmetry" (p. 7).

These antecedents were expected to have influence on customer trust in the Internet banking and hence the adoption of Internet banking. Mukherjee and Nath (2003) examined customer trust in the Internet banking (as a banking medium) as a result of the customer having trusted the bank. From an analysis of 510 responses obtained from a survey, Mukherjee and Nath observed that shared value had the strongest effect trust.

It important to note that, in this thesis, the researcher of this study only will focus on issues, relating to perceived customer/organisational relationship, namely: customer trust; customer commitment and customer satisfaction because of their importance in the extant literature. Moreover, this study will investigate customer trust in e-channel from the manager's point of view and not from the customer's point of view.

Customer Commitment and the Tendency to Adopt Internet Technology

Customer commitment to the bank and the tendency to adopt Internet technology is discussed below.

Reichheld and Schefter (2000, p. 106) referred to loyalty in e-commerce as

> ... earning the trust of the right kinds of customers – customers for whom you can deliver such a consistently superior experience that they will want to do all their business with you.

Thus, if a business organisation (e.g., a bank) needs to succeed in the e-commerce it must differentiate itself from rivals, Reichheld and Schefter argued, but most business organisations rushed to establish a global presence to acquire customers on Internet without considering how to retain them. Indeed, this was a major problem because acquiring and keeping a customer on the electronic distribution channel is harder than via the traditional distribution channel. Part of the difficulties arose from the fact that on Internet it is easy to copy the creation of values for customers on the web site. Business organisations (e.g., banks) should therefore think beyond just

acquiring customers through e-commerce by focusing continuously on creating values to retain customers. Business organisations could realise profit in the long-term only after achieving superior customer loyalty (Reichheld and Schefter). They offered several suggestions for business organisations to succeed in e-commerce.

(1) In the early stage of an online relationship, business organisations must invest more because profit will only be realised in the long-term and not in the short-term.

(2) Focus should be on extending the range of services/products in order to target various customers with various needs.

(3) Focus should be on the loyal customer, because a loyal customer often refers (e.g., offers suggestions and advice) new customers to a particular vendor utilising e-mail as a way of communication.

(4) Focus should also be on presenting services/products on the web site to represent capabilities of delivering services in compliance with promises through well-integrated web site design to gain a customer trust, as the customer would have no other knowledge of the business organisation except word of mouth referral.

A more recent of Vatanasombut et al. (2004) also highlighted the fact that maintaining a customer is more challenging on Internet, suggesting that the level of perceived customer loyalty affects business organisational success. They argued that the level of competition in e-commerce affects the likelihood of retaining customers in the long run. In their study, they identified three dimensions of customer loyalty, namely: (1) reduction in consumers' search costs; (2) lower barrier to entry; and (3) reduced distinctiveness of firms. Their focus, however, was on how perceived customer loyalty could affect business organisational success in e-commerce. Customers were more likely to deal with large organisations than small, they said, because of perceptions that these large organisations had the capability to offer better services (e.g., through economies of scale) and more benefits (e.g., through skills). Vatanasombut et al.'s suggestions for business organisational success in the e-commerce included:

(1) Focus on the loyal customer so that word-of-mouth recommendation can spread from a satisfied customer who would then pass on the information about the organisation's benefits and services to a new customer.

(2) Through the experience curve, the organisation can learn to be superior in delivering the services and benefits, once it has demonstrated its uniqueness, the customer would be willing to pay even more for these services and benefits.

(3) Focus on building a customer database so that business organisations can understand their customers' behaviour through research marketing, in order to address the needs and meet the expectations of various customers in the industry.

(4) Focus on educating the customer on security issues to assure them that the web site is secure enough for them to engage in a relationship with the organisation.

(5) Empower customers by enabling them to make their own choices.

(6) Create barriers to loyalty switching by building a customer/organisational relationship in ways that are difficult for rivals to copy.

(7) Build reputation and service quality through traditional distribution channels (e.g., bank branches).

In a study of customer contact personnel in retail bank services in Australia, Julian and Ramaseshan (1994) argued that to gain competitive advantage in a competitive banking industry customer service is very important. They suggested that banks would need to address the issue of retaining customers through good service so that the risk of switching banks could be minimised. Replacing lost customers would be very difficult and costly, they pointed out.

Adam et al. (2002) highlighted the fact that Internet enables business organisations to establish relationships with customers through consistent and reliable services. From a comparison of business use of Internet technology in three countries — Australia, New Zealand and UK, they reported that Australian business users of Internet technology are less sophisticated than British business users of Internet Technology. This meant that banks could also motivate customers to stay loyal to the business organisation. Attracting and keeping valuable customers is part of a customer relationship (Romano and Fjermestad, 2003). However, Verona and

Prandelli (2002) questioned customer loyalty in e-commerce due to the difficulty in maintaining the benefits. Recently, Vatanasombut et al. (2004) argued that Internet enables business organisation to establish a global presence and acquire customers in a very cost-effective way; however, the real challenge comes when the competition increases because the possibility of retaining customers will be reduced in the long term. This suggests that business organisations must be unique in terms of delivering service value to the customer in order to win loyalty over Internet.

In a more recent study, Chiou (2004) examined the antecedents of consumer loyalty toward Internet service providers in Taiwan and found that perceived value and trust is a major determinant of loyalty. Anderson and Srinivasan (2003) investigated the influence of loyalty in e-commerce. They defined loyalty in the context of e-commerce as "... the customer's favourable attitude toward an electronic business resulting in repeated buying behavior" (p. 125). From an analysis of 1211 responses, Anderson and Srinivasan reported that trust and perceived value were the major determinants of customer loyalty to the business organisation in e-commerce.

Gummerus et al. (2004) conducted an online survey to examine customer loyalty in the online health care service. They argued that lack of trust affects the adoption of an online health care service. The theoretical underpinning of their study was whether or not customer loyalty was affected by customer satisfaction and customer trust. From their analysis of 421 health care customers, Gummerus et al. reported that:

(1) customer loyalty is influenced by customer satisfaction

(2) customer satisfaction is influenced by customer trust.

(3) a major determinant of customer trust is security.

This suggests that customer loyalty is related to customer trust.

Customer Satisfaction and the Tendency to Adopt Internet Technology

The following discusses the importance of customer satisfaction in the Internet technology adoption.

Much of the literature (e.g., Peters and Waterman 1995; Mckenzie, 2001; Kotler, 2002) appears to have emphasised the importance of being close to the customers. This means that in a competitive environment a business organisation's success is dependent on customer satisfaction. Kotler (2002) believes that customer satisfaction is so important to the area of professional service marketing because it allows business organisations to build relationship with their customers. Customer satisfaction, he maintains, could provide some sort of indication of the strength or weakness of the customer relationship. This suggests that the customer relationship can be affected if the business organisation falls short in satisfying its customers. In the general marketing context, Kotler (p. 113) defined customer satisfaction as the "... measure of the extent to which a service's perceived performance matches the buyer's expectations". This means that if an organisation perceives that the banking services offered through Internet would be able to meet the expectation of its customers then it would adopt Internet. In an effort to understand customer satisfaction, Kotler (2002) identified the five most common objectives of measuring customer satisfaction, namely:

(1) To get closer to the customer by understanding the customer's needs

(2) To measure continuous improvements by understanding the customer's perceptions about service/product quality.

(3) To solicit customer input by utilising a customer as a source on innovation and improvement.

(4) To measure competitive strength and weaknesses by identifying areas of strategic importance (competence or lack of competence) to guide a strategy.

(5) To link customer service measurement data to internal performance and reward system measures by identifying customer satisfaction and financial performance.

Indeed, these objectives of measuring customer satisfaction would ensure success for business organisations (e.g., banks) in e-commerce because they would be able to improve their services e.g., banking services in the industry.

Jabnoun and Al-Tamimi (2002) examined perceived services quality in the commercial banks in the United Arab Emirates (UAE)[6]. They emphasised the

[6] A neighbouring country of Oman

importance of service quality to maintain market share. From an analysis of 462 responses to a survey of bank customers, Jabnoun and Al-Tamimi concluded that customers value human skills the most in service quality.

The authors (Mckenzie, 2001; Kotler (2002) emphasised the importance of quality of service in customer satisfaction. This means that meeting the expectation of the customer is very important in satisfying them. Kotler (2002) also highlighted the fact that timely service delivery is very important when considering quality of service. However, Wootten (2003), who examined the conflict that arises from the car trading industry on Internet, argued that conflict could arise when business organisations were not meeting the expectations of their customers. In his study, Wootten reported that conflict occurred when suppliers blocked other suppliers in order to take control in the car industry by lowering or increasing their prices. Conflict could also arise between business organisations (e.g., banks) and customers when customers' expectations were not met. For example, human error and long queues while processing bank transactions could cause frustration and even anger among customers, and hence could lead to conflict. Webb (2002) studied channel distribution management in e-commerce. He highlighted the fact that channel conflict received major attention in the 1970s and 1980s whereas in the 1990s it received very little attention. Recently, marketing in e-commerce had developed channel conflict. He argued that conflict could arise due to the individual differences in the perceptions and goals. Webb pointed out that whereas in destructive conflict relationships could be threatened, in constructive conflict it could motivate an organisation to be more creative. His study identified the major cause of conflict as competition over scarce resources. Conflict between the organisation and customers, however, arose over the meeting of the expectations of the customers rather than the meeting of the expectations of the organisation.

Ford (2004) also studied channel conflict between organisations, employees and customers. He highlighted the fact that the use of e-mail enables business organisations to deal with unpleasant business at a distance.

Earlier study of Robey et al. (1993) examined relationships between the perceptions of conflict and successful development of IS projects, and focused on the conflict developed during system development. From an analysis of 84

responses obtained from three organisations, they revealed that conflict resolution was associated with successful development of a system. This implies that if a conflict arises between the bank and customer on Internet it could be managed.

Athanassopoulos (2000) examined customer satisfaction in order to explain customer switching behaviour in the banking industry in Greece. His study highlighted the importance of service quality in customer satisfaction. Thus, service quality can affect customer satisfaction. Athanassopoulos argued that business organisations should consider customers' expectations and perceptions in service quality. This suggests that if customers' expectations are not met by the organisation then customers are more likely to develop negative perceptions and even engage in conflict with the organisation. Service quality failure could lead to customer dissatisfaction and hence motivate customers to switch banks. From an analysis of responses obtained from a survey (600 business customers and 1200 individual customers), Athanassopoulos reported that:

(1) service quality is associated with customer satisfaction; and

(2) customer satisfaction explained customers' switching behaviour.

Rust and Zahorick (1993) noted that in the case of a dissatisfied customer the switching behaviour would have a negative consequence on market share and hence profitability. Ennew and Binks (1999) also examined customer satisfaction in the banking industry and found that service quality is important.

Ramachandran (2003) found that a customer could be dissatisfied with steps involved in purchasing the service/good, including collection of data, communication of service/product quality, payment procedure, and clarification of usage. This suggests that ultimately customer satisfaction is an important factor in Internet technology adoption.

Summary of the major findings from the Extant Literature

The major findings related to perceived customer/organisational relationship from the extant literature are outlined in Table 2.3.

Table 2.3: Major findings from extant literature related to perceived customer/organisational relationship

Perceived customer/organisational relationship	Identified literature
Customers trust	Mayer and Davis, 1995; Keen, 1997; Gefen, 2000; Jarvenpaa et al., 2000; Kimery and McCord, 2002; Ruyter et al., 2001; Whitman, 2004; Mouldin and Arunachalam, 2002; Liu et al., 2004; Hoffman et al., 1999; Koved et al., 2001; Warrington et al., 2000; Janet, 19997; Hassler and Moore, 2001; Schoder and Yin, 2000; Gefen, 2002; Reichheld and Schefter, 2000; Khalfan, 2004; Salisbury et al., 2001; Akkeren and Cavaye, 1999; Chung and Paynter, 2002; Sathye, 1999; Mols, 2000; Salnoske, 1997; Held and Bowers, 2001; Mukherjee and Nath, 2003; Cummings and Bromiley, 1996.
Customer commitment	Reichheld and Schefter, 2000; Vatanasombut et al., 2004; Julian and Ramaseshan, 1994; Adam et al., 2002; Romano and Fjermestad, 2003; Verona and Prandelli, 2002; Chiou, 2004; Anderson and Srinivasan, 2003; Gummerus et al., 2004.
Customer satisfaction	Peters and Wterman, 1995; Mckenzie, 2001; Kotler, 2002; Jabnoun and Al-Tamimi, 2002; Wootten, 2003; web, 2002; Ford, 2004; Robey et al., 1993; Athanassopoulos, 2000; Rust and Zahorick, 1993; Ennew and Binks, 1999; Ramachandran, 2003.

The important issues related to perceived customer/organisational relationship presented in Table 2.3 will be utilised in the research design in Chapter 4. The major findings of extant literature review that will be used as a guide for research design are summarised below.

Customers Trust

- Security

Customers Commitment

- Customer loyalty

Customers Satisfaction

- Reduction of conflict

2.3.4 Perceived Ease of Use and the Tendency to Adopt the Internet Technology

The importance of ease of use (or complexity, the opposite of ease of use) in determining successful adoption of IT/IS has been highlighted in the previous IT/IS literature (Davis et al., 1989; Moore and Benbasat, 1991; Taylor and Todd, 1995a). Davis (1989, p. 320) refers to perceived EOU as "...the degree to which a person believes that using a particular system would be free of effort". He noted that this construct is similar to Bandura's (1982) self-efficacy. Bandura (1982, p.122) refers to self-efficacy as "... judgments of how well one can execute courses of action required to deal with prospective situations". This is also quite similar to the concept of perceived behavioural control defined in Ajzen's (1991) theory of planned behaviour (TPB). In the context of Internet technology adoption in the banking industry, this means that perceived ease of use is the degree to which an individual perceives that Internet technology is easy (e.g., to navigate, to learn and to manage banking transactions). Therefore, this construct is concerned with the extent to which a bank manager believes that Internet technology is easy for customers to use to do banking transactions, requiring little effort to navigate, to learn and to manage banking transactions.

Moore and Benbasat (1991) indicated that this construct is similar in notion to the construct defined by Rogers (1995, p. 16) as "complexity" in the diffusion of innovation theory. This means that if a bank manager perceives that Internet technology is not complex and requires no specialised skills and could be implemented with little effort in a short period of time, then the chance of adopting it would be greater.

Empirical studies (Tornatzky and Klein, 1982; Moore and Benbasat, 1991; Davis et al., 1989) examining the relationship between perceived ease of use and IT/IS adoption in the general domain found support for this construct. Other empirical studies (Tan and Teo, 2000; Brown et al., 2004; Anandarajan et al., 2000) examining this relationship in the banking industry, also found support for the importance of this construct.

An interesting study (Al-Wohaibi et al., 2002) from Oman studied the fundamental risk factors in deploying IT/IS projects in Omani government organisations. The aim of this study was to identify factors that have influence on Omani government IT/IS. The author conducted a group discussion with 40 IT/IS experts from different nationalities to collect their viewpoints about the issues related to IT/IS failure in Omani government through a workshop conducted in Muscat, Oman on 14 October 1999 (Al-Wohabi, 1999). From this group discussion workshop and a review of the literature, the authors identified four major risk factors, namely: (1) human resource deficiency; (2) organisational inefficiencies; (3) the immaturity of the IT business culture; and (4) reliance on localised systems solutions. In their conclusion they proposed six fundamental solutions for the Omani government, which they believe can be applicable not only to Oman but also to other GCC countries because of their common social, economical and cultural characteristics. Specifically, they suggested:

(1) development of a plan to train the local people by considering IT training in the strategic plan and financially support for this training;

(2) more emphasis on IT literacy in Omani government organisations by introducing IT/IS in most schools to develop IT/IS awareness in the community;

(3) establishment of a single government agency that is responsible for setting guidelines and standards for IT acquisition at the national level;

(4) creation of a vision for a powerful and modern IT infrastructure: without such a vision a country cannot survive in the modern world;

(5) the university should make it compulsory, as part of the degree curriculum, to have an "Industry Practice School"; and

(6) promotion of investments in the Arabisation of IT systems.

Understanding perceived ease of use is important (e.g., in the banking industry) because it has implications for the design of training intervention to manipulate the perception of ease of use (Venkatesh and Davis, 1996; Venkatesh, 1999; Rashid, 2001) among users of Internet technology in the banking industry.

McKeen et al. (1994) argued that task and system complexity have the potential to affect IT/IS adoption, indicating that the degree of complexity in task and system would have influence on IT/IS adoption. From an analysis of 151 independent systems, McKeen et al. showed that task and system complexity are associated with IT/IS adoption. This suggests that the more complex the Internet banking system is perceived to be, the less likely, that it will be adopted.

The above studies, examining the relationship between perceived ease of use and IT/IS adoption, suggest that a bank manager would only be motivated to adopt Internet technology if he/she perceives that it is easy to navigate, to learn and to manage banking services. Therefore, the author speculates (or expects) that if a bank manager has favourable ease of use perceptions about Internet technology adoption then he/she would have a tendency to adopt Internet technology. This means that the more favourable perception a manager has about Internet technology adoption, the more likely it is he/she would be motivated to make the decision to adopt it in the banking industry. The issues related to perceived ease of use are explored below.

Easy to navigate and the Tendency to Adopt Internet Technology

The role of easy to navigate in the Internet technology adoption is discussed below.

The issue of easy to navigate is about how easy it is to navigate through the Internet technology in the banking industry to process banking transactions. The importance of awareness to the adoption and use of IT/IS was highlighted by Karahanna and Limayem (2000). They indicated that the more people are familiar with or aware of the IT/IS the more easy it would become for them to adopt or use the IT/IS. They believe that training could improve awareness and develop knowledge among IT/IS participants and so that the technology could be become more beneficial or advantageous to them when they are trying to accomplish their objectives or tasks.

Tan and Teo (2000) indicated that Internet technology in the banking industry is very easy to use because it is user friendly. This means that user friendliness is an important determinant of ease of use because it indicates that Internet technology adoption in the banking industry is not complex.

A second interesting notion was put forward by Venkatesh (1999), who examined the role of training in creating favourable users' perceptions. He emphasised the importance of perceived ease of use in predicting IT/IS adoption. The author argued that training could influence knowledge (or awareness about Internet technology) and hence users' perceptions of ease of use. However, other authors (Davis et al., 1989; Venkatesh, 1999) indicated that as individuals gain more knowledge through training (or experience) their perceptions of ease of use become less important in the prediction of IT/IS because then the focus would be on expected potential benefits rather than on ease of use. This means users' knowledge is important in the formation of favourable perceptions of ease of use. From an analysis of 69 responses, Venkatesh, (1999) reported that level of knowledge was associated with the users' perceptions of ease of use.

Rashid (2001) conducted an empirical study on the adoption of Internet technology (IT) in the United Arab Emirates. The aim of the study was to examine the antecedent factors that influence the use of IT. This study extends the work of Davis et al. (1989) to introduce the extended technology acceptance model (ETAM). In his study, two antecedent variables were identified — exposure resulting from IT and direct experience which have the potential to affect the development of perception and, hence, the use of IT. The theoretical underpinning of his research is whether or not these antecedent variables positively correlated with IT usage. From an analysis of 227 responses obtained from government organisations and public service using a questionnaire survey, Rashid found that exposure to IT and direct experience were positively related with the perceptions of ease of use and, in turn, affected BI usage.

Abdul-Gader and Kozar (1995, p. 535) also reported empirical evidence of the impact of computer alienation on IT investment decisions. Their study shed light on how perceived ease of use is affected and how it affects IT/IS adoption. From an analysis of 97 decision-makers from the USA and Saudi Arabia, they reported, "... computer knowledge, computer experience and education level are closely associated with alienated beliefs and attitudes toward information technology".

The notion of knowledge or awareness of Internet banking services was also supported by Lichtenstein and Swatman (1997), who examined acceptable Internet usage policy for organisations in Australia in order to provide guidance policies for organisations. They argue for an acceptable Internet usage policy for organisations.

They maintain that, organisations lack control of Internet usage. Their study addressed four issues, namely: (1) legal issues; (2) managerial, administrative, and operational issues; (3) technical issues; and (4) human issues. The researchers suggested that in order to achieve acceptable Internet usage policy organisations must consider Internet strategy, organisations' awareness, existing laws, organisation culture and individual roles. [7]This means that gaining knowledge for banks' employees is also important.

Montealegre (1998) also supported the notion of knowledge on awareness of IT/IS services by conducting an empirical study on the adoption of Internet technology in less developed countries — Chile, Costa Rica, Ecuador, and Peru. The aim of the study was to explore how Internet Technology is adopted in these four Latin American countries. Other researchers (McKenney, 1995) introduced the "cascade" model to examine IT adoption in developed countries. Montealegre's study extends McKenney's research by using his "cascade" model to examine how IT is adopted in less developed countries. In this study three themes were identified – evolving strategy, managing resources and managing partnership — which have potential implications on vision, skills, and partnership. The theoretical underpinning of this research is whether or not these themes contributed successfully to the development of Internet technology in these four Latin American countries. 39 formal interviews were conducted with individuals from government, academic, private, and international organisations using interview methodology. Comparative analysis was used to test emerging explanations with possible alternatives. From this analysis, Montealegre (1998) found that all countries which led Internet technology adoption had: (i) access to the technology; (ii) resources and funds; and (iii) cooperation between the government, private companies, and international organisations. The author noted these countries differed in their deployment of strategies, resources and partnership. The implications of these three themes were that: as the strategy evolved, a vision became clear; as the Internet network broadened, different skills were required; and as the Internet developed, a different partnership was required.

The study conducted by Montealegre (1998) indicates that each country deployed their strategies, resources and partnership differently, and that these three themes

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[7] Lichtenstein and Swatman (1997) studied a large scientific research establishment in Australia called "Strategic Scientific Research Institute" (SSRI). In this study, the case study methodology, based on an interview with the SSRI's network manager and a semi-structured questionnaire, was adopted to collect data.

have implications for the clarity of the vision, level of skills, and level of interaction with others. However, the validity of these implications needs to be tested in other situations.

Venkatesh and Davis (1996, p. 451) expanded this notion to indicate that, "... training interventions aimed at improving computer self-efficacy of users may be more effective than improved interface design for increasing user acceptance". This suggests that educating customers and employees is very important in gaining knowledge and hence would overcome the problems of poor user interface. A more recent study of Davis and Venkatesh (2004) indicated that perceived ease of use relies on procedural knowledge where an individual learns by doing the steps within the procedure. This means that users can gain knowledge through practice.

Boynton et al. (1994) also examined the influence of IT management practice on IT use in large organisations. From a survey of senior IT managers from 132 firms, they revealed that IT knowledge was a major factor in explaining IT/IS adoption.

Thornton and White (2001) also investigated customer orientations and usage of financial distribution channels in Australia and indicated the influence of knowledge about Internet banking services on usage. They revealed that knowledge about Internet banking services was an important factor in determining usage.

A third interesting notion came from an earlier mentioned study of Ramsey and Smith (1999), who empirically investigated alternative distribution channels in the Australian banking industry. In their findings, they reported Internet technology adoption had not been picked up in the Australian banking industry as expected by the market due to lack of accessibility.

This notion was supported by Joseph et al. (1999), who examined the importance of distribution channels in the Australian banking industry and its impact on banking services. They also highlighted the fact that the importance of accessibility of banking services on Internet. The authors found accessibility was perceived as an important factor in determining usage.

Another study (Cahu and Lai, 2003) investigated the determinants of user acceptance of Internet technology in the banking industry. From an analysis of 160 responses, they reported that accessibility is an important factor in perceived relative advantage.

However, Thompson et al. (1991) did not find correlations between training or support and IT/IS adoption. The authors indicated that lack of proper operationalisation of training definition was the major contributor to this finding.

Easy to learn and the Tendency to Adopt Internet Technology

The following discusses the importance of easy to learn in the Internet technology adoption.

Considering the issue of how easy it is to learn Internet technology in the banking industry to conduct banking transactions, Dabholkar (1994) stressed the importance of flexibility in system design to facilitate options for customers. Flexibility of system design he suggested enables customers to have more control over their services (e.g., banking services).

This notion was also supported by Joseph et al. (1999), who noted the role of customisation of banking services over Internet. They indicated that special banking services could be offered for the elderly and disabled and that non-English speaking customers could be offered additional options. This study revealed that customisation is associated with Internet technology adoption in the Australian banking industry.

The researcher of this study expects that concerns about knowledge of Internet banking services would be raised here by participants because, from learning people acquire knowledge. The literature review (Venkatesh, 1999; Davis et al., 1989; Abdul-Gader and Kuzar, 1995) concerning knowledge about Internet banking services is highlighted above.

In support of the easy to learn notion, Larkey et al. (2002) highlighted the importance of searching and accessing Arabic web pages on Internet. They point out that the orientation of Arabic writing is different from English (e.g., from right to left) and the Arabic alphabet consists of 28 letters as opposed to 26 in the English alphabet. This Arabic alphabet, they suggested could be extended to 90 additional shapes, marks and vowels and their study raises the question of how retrieval effectiveness can be improved for an Arabic search on Internet.

Karahanna and Limayem (2000) also highlighted the concern over accessibility raised by IT/IS participants. Identifying two types of accessibility: (1) physical accessibility and (2) informational accessibility, they defined physical accessibility as "... the extent to which someone has physical access to the hardware needed to use the system..." and informational accessibility as "... the ability to retrieve the desired information from the system" (p. 53). The people with more access to the information were more likely to use these technologies as well as benefit from them, according to Karahanna and Limayem, however, the people with more physical access were more likely to perceive the technologies as easy to use.

Easy to manage and the Tendency to Adopt Internet Technology

The importance of easy to manage Internet technology in the banking industry is detailed below.

Easy to manage is associated with how easily users can manage Internet technology in the banking industry such as managing banking transactions. The researcher of this thesis, as mentioned above, expects that concerns over e.g., accessibility and customisation of banking services on the Internet will be raised in this study by participants, because managing banking transactions requires both accessibility and customisation of banking services on the Internet.

The literature review that raises concerns over — accessibility of banking services (e.g., Ramsey and Smith, 1999; Joseph et al, 1999) and customisation of banking services (e.g., Dabholkar, 1994; Joseph et al., 1999) are identified above.

Summary of the major findings from the Extant Literature

The major findings related to perceived ease of use drawn from the extant literature, are shown in Table 2.4.

Table 2.4: Major findings of the extant literature review related to perceived ease of use

Perceived ease of use	Identified literature
Easy to navigate	Karahanna and Limayem, 2000; Tan and Teo, 2000; Venkatesh, 1999; Davis et al., 1989; Rasid, 2001; Abdul-Gader and Kuzar, 1995; Lichtentein and Swatman, 1997; Montealegre, 1998; Mckenny, 1994; Venkatesh and Davis, 1996; Davis and Venkatesh, 2004; Boynton et al., 1994; Thornton and White, 2001; Ramsey and Smith, 1999; Joseph et al., 1999; Cahu and Lai, 2003; Thompson et al., 1991.
Easy to learn	Dabholkar, 1994; Joseph et al., 1999; Venkatesh, 1999; Davis et al., 1989; Abdul-Gader and Kuzar, 1995; Larkeyet al., 2002; Karahanna and Limayem, 2000.
Easy to management	Ramsey and Smith, 1999; Joseph et al, 1999; Dabholkar, 1994; Joseph et al., 1999.

Table 2.4 reveals important issues related to perceived ease of use identified from the literature review. A summary of the major findings of the above literature review is presented below.

Easy to navigate

- User friendliness

- Awareness/knowledge about banking services on Internet (e.g., awareness of an online banking services)
- Accessibility of banking services on Internet technology

Easy to learn

- Customisation of baking services
- Awareness/knowledge about banking services on Internet (e.g., awareness of an online banking services)
- Accessibility of banking services through Internet technology

Easy to Management

- Accessibility of banking services on Internet
- Customisation of baking services

The above list of issues drawn from the extant literature will contribute to the researcher design, which is detailed in Chapter 4.

2.4 Summary of the chapter

This chapter reviews the extant literature that has explored relevant theories and models of Internet technology adoption in the banking industry of a developing country, such as Oman, and a developed country, such as Australia. The aim was to understand the research issues related to Internet technology adoption with a certain framework. The major findings drawn from the extant literature will inform and guide the research study in three ways: it will influence (1) the research design in Chapter 4; (2) the analysis of evidence in Chapter 5; and (3) conclusions in Chapter 6.

Most studies in the extant literature reviewed in this Chapter suggest that the two previously examined factors (perceived relative advantage and perceived ease of use) do not provide full understanding of the Internet technology adoption in the banking industry. Hence, in order to understand broadly Internet technology adoption it is necessary to include other variables such as perceived organisational performance and perceived customer/organisational relationship, which have not been examined previously in the context of Internet technology adoption in the banking industry. Therefore, this study will contribute to knowledge in two areas:

(1) In the context of the banking industry, these four variables (R, P, CR, and EOU) are expected jointly to influence the decision to adopt Internet technology in the banking industry of Oman and Australian. Based on the extant literature, this study will use these four factors as a guide to explore Internet technology adoption in the banking industry of Oman and Australia. Specifically, the research question below seeks to provide broader understanding of Internet technology adoption in the banking industry.

What were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

(2) More specifically, this research aims to investigating these four variables jointly in the developing country such as Omani banking industry and to compare the findings with the experience in developed countries such as Australia; and

(3) Solve an existing problem in the Omani banking industry (reluctant to adopt Internet technology).

2.4.1 Critique of the Validity of Appropriate Research Literature

The above review of extant literature on the adoption of Internet technology indicates that there is:

(1) a lack of research on Internet technology adoption in developing countries; and

(2) methodological problems associated with studies examining Internet technology adoption.

Lack of Research on Internet Technology Adoption in Developing Countries.

Researchers including Daniel (1999), Sathye (1999), Joseph et al. (1999) Ramsey and Smith (1999), Mols (2000), Thornton and White (2001) have concentrated on Internet adoption in the banking industry in developed countries. However, none of these studies addressed the adoption of Internet technology fully in developing countries. For example, Al-Hosini (2000), Anandarajan et al. (2000) and Rashid (2001) are the only studies reported that have examined the adoption of Internet technology in developing countries. Both studies (Al-Hosini's and Rashid's) were conducted in the United Arab Emirates (UAE)[8] but were related to general business organisations rather than banking. And Anandarajan et al.'s study conducted in Nigeria was the only reported that have examined Internet technology adoption in banking industry in developing country. Moreover, these studies focused on perceived organisational culture (Al-Hosini), perceived ease of use (e.g., Rashid; Anandarajan et al.) and perceived relative advantage (Anandarajan et al.). None of the reviewed studies examined jointly four factors identified in extant literature above (R, P, CR, and EOU) to understand Internet technology adoption in the banking industry. Whereas in this study, the aim is to explore the four factors jointly

[8] A neighbouring country of Oman.

in the context of Internet technology adoption in the banking industry of Oman and Australia.

Methodological Problems Associated with Studies Examining Internet Technology Adoption

Omitted Variables

The aim of several researchers (e.g., Mols, 2000; Sathye, 1999; Ramsey and Smith, 1999) was to investigate the perception variables affecting the adoption of Internet technology in the banking industry. However, none of these studies examined how managers' perceptions: perceived relative advantage (RA), perceived organisational performance (P), perceived customer/organisational relationship (CR), and perceived ease of use (EOU), simultaneously influenced their decisions to adopt Internet technology in the banking industry. Moreover, the two variables: P and CR have received very limited attention in the literature.

Sample Selection

For example, Davis (1989, 1993) and Szajna (1996) examined two key perception variables (U and EOU) and their influences on computer usage to predict and explain usage behaviour. Though they arrived at a well defined conclusion, their examinations had three major weaknesses: (1) the systems software (e-mail) used in the test was a simple software package, used for office messaging work, and does not represent the core business operation where sophisticated software programs are involved; (2) the perception variables selected only represented the users' perspective; and (3) they found that perceived U was the strongest determinant of BI to use computer systems. However, Igbaria et al. (1997) found that perceived EOU was the strongest determinant of BI to use computer systems.

Method of Research

Most studies cited, with the exception of e.g., Lichtenstein and Swatman (1997), Montealegre (1998) and Khalfan (2004), used mailed questionnaires. Sekaran (1992) points out the disadvantages of mail questionnaires, namely, a low return rate, difficulty in clarifying doubts and difficulty in developing a representative sample. Given these disadvantages and lack of development in the mail system in the Gulf Cooperation Council (hereafter GCC) countries, this research will only use interviews. [9]

In sum, none of these above studies has recognised the suitability of a model which incorporates all four key perception variables, namely: perceived relative advantage; perceived organisational performance; perceived customer/organisational relationship; and perceived ease of use, jointly in the banking environment and in particular, in a developing country, to adequately explore the question,

what were the enablers and inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

This exploratory research will utilise the above literature review as a guide in: (1) answering the above question; (2) developing a model/propositions to understand and solve the problem of Internet technology adoption in the Omani banking industry; (3) examining an industry in a developing country not previously researched; and (4) using a more appropriate research methodology.

[9] Gulf Cooperation Council — Saudi Arabia, Oman, United Arab Emirates, Kuwait, Qatar, and Bahrain was first formed in 1985 with the objective to cooperate together on issues (e.g. political, economic, social, and technological) related to the development of the Gulf region.

Chapter Three: Theoretical Framework For Understanding Internet Technology Adoption in the Banking Industry

3.1 Introduction

As indicated in Chapter 1, this study investigates Internet technology adoption in the context of the banking industry in Oman and Australia and focuses particularly on exploring the factors that motivate decision makers to adopt Internet technology, through a comparison of the Omani banking industry with the Australian banking industry. In order to understand the determinants of Internet technology adoption in the banking industry, this Chapter reviews the theories/models in the literature and identifies relevant gaps. Therefore, the aim of this extant literature review is to understand the major determinants of Internet technology adoption in the banking industry according to a certain theory.

It is suggested here "... explaining human behavior in all its complexity is a difficult task" (Ajzen, 1991, p. 179) and that the difficulties lie in the complexity of understanding Internet technology adoption (or lack of adoption) behaviour within the context of the banking industry in Oman (non-adopter) and Australia (adopter). This specific behaviour involves people (e.g., bank manager) and people behave in different ways. This aspect of specific behaviour can be examined using the Technology Acceptance Model (TAM). As this Chapter indicates, the TAM model, developed from the Theory of Reasoned Action (TRA), has the potential to explain such specific behaviour. The Theory of Planned Behaviour (the extension of the TRA) has been highlighted to broaden our understanding of the concept of behavioural intention. As this Chapter argues, bank managers are expected to make rational decisions and hence to consider the outcome of the decisions in terms of costs and benefits. For example, bank managers make the decision to adopt Internet technology in the banking industry because they expect that Internet technology:

(1) will improve the banks' relative advantage (hereafter R);

(2) will improve the banks' performance (hereafter P);

(3) will improve the customer/bank relationship (hereafter CR); and

(4) will be easy to use (hereafter EOU).

Understanding a manager's specific behaviour in deciding whether to adopt (or not to adopt) Internet technology in the banking industry is a challenging issue in the information technology/information system (hereafter IT/IS) literature because it involves a human decision in the process of technology adoption. The adoption and utilisation of Internet technology in the banking industry has the potential to provide benefits for banks in Oman and Australia (e.g., expand market share and, hence, increase shareholders' value). Therefore, the evaluation of IT/IS success (or failure) is an important issue in the IT/IS literature (DeLone and McLean, 1992, Yoon et al., 1995; Coombs et al., 2001).

Jackson et al. (1997) summarised these views as follows:

> To make more informed decisions and to meet the challenges of developing systems that satisfy these demands, system developers need to achieve a better understanding of factors that ultimately lead to system usage. (p. 357).

In attempting to evaluate IS success (or failure) many research studies have sought to define and test the determinants of IS success. Among these studies, IS usage was proposed to be an important factor in measuring IS success (Schultz and Slevin, 1975; Ein-Dor and Segev, 1978; Ives et al., 1983)

In supporting the above view, several empirical studies (Lucas, 1975; Baroudi et al., 1986; Swanson, 1988) adopted IS use as a key measure for IS success. DeLone and McLean (1992) asserted that IS use is "... a fairly accessible measure of IS success" (p. 68). Indeed, IT/IS use is held to be a fairly acceptable measure in the IT/IS

literature because it indicates user acceptance of the idea (or an innovation). However, these studies findings were inconclusive due to the lack of an integrated paradigm. The researchers (Davis et al., 1989; MeLone, 1990; DeLone and McLean, 1992) addressed these concerns.

Swanson (1988) stressed the importance of understanding a user's behaviour to bridge the gap between IT/IS design (or an innovation) and utilisation. The importance of understanding an IT/IS user's behaviour was also emphasised in many studies (Lucas, 1975; Robey, 1979; Srinivasan, 1985) in the IT/IS literature. There is no doubt that the need to bridge the gap between IT/IS design and utilisation would require deep understanding of a user's behaviour and how it could be measured. In pursuing this view, the focus turned to social psychology and IT/IS literature (MeLone, 1990).

Among these studies a relationship between attitude and IT/IS use was found (Lucas, 1975; Swanson, 1988; Coombs et al., 2001). However, this literature did not provide clear understanding of the IT/IS user's behaviour. Therefore, more effort was devoted to understanding how an individual's internal attitude is influenced by external factors. The studies that emerged focused on the influence of external factors such as system design (e.g., Benbasat and Dexter, 1986; 1986; Dickson et al., 1986), implementation (Lucas, 1978; Fuerst and Cheney, 1982; Ives and Olson, 1984), system development (Alavi, 1984; Baroudi, et al., 1986) and cognitive style (Bebasat and Taylor, 1978).

To a great extent, these studies provided an understanding of IT/IS users' behaviour. However, they did not draw a clear distinction between individual attitudes and beliefs (Swanson, 1982). Moreover, the lack of an integrated paradigm has resulted in mixed and inconclusive research findings (Davis et al., 1989). Therefore, the Technology Acceptance Model (TAM) was one of the emerging alternative in the IT/IS literature. This model was adapted from the behavioural intention model, the Theory of Reasoned Action (TRA) used in social psychology (Davis, 1986; Davis et al., 1989).

The following discussion is divided into five main sections, namely:

Section 3.2 — theoretical and empirical studies examining theory of reasoned action;

Section 3.3 — theoretical and empirical studies examining theory of planned behaviour;

Section 3.4 — theoretical and empirical studies examining technology acceptance model;

Section 3.5 — theoretical and empirical studies examining theory of diffusion of innovation; and

Section 3.6 — summary of the Chapter.

3.2 Theoretical and Empirical Studies Examining Theory of Reasoned Action (TRA)

The purpose of this section is to provide the reader with a background to the TAM to understand its development. Davis (1986) adapted TRA as a potential theoretical foundation for developing TAM. He gave a number of reasons for his adaptation:

1) TRA is designed to predict and explain any human behaviour (Ajzen and Fishbein, 1980) and, hence, can serve as a basis for understanding any behaviour.

2) TRA is considered to be a well researched behavioural intention model. It has proved to be successful in predicting and explaining a wide range of behaviours (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Ryan and Bonfield, 1980).

3) In predicting and explaining behaviour, TRA has been applied in various fields. For example, in consumer behaviour (Thomson et al. 1994; Engel et al., 1995; Taylor and Todd, 1997); moral behaviour (Vallerand et al., 1992); ethical/unethical behaviour (Loch and Conger, 1996; Chang, 1998; Gibson and Frakes, 1997); environmental behaviour (Goldenhar and Connell, 1993); coupon usage behaviour (Simp and Kavas, 1984; Bagozzi et al., 1992); fast food consumption behaviour (Bagozzi et al., 2000); adoption of strategic IS behaviour (Mykytyn and Harrison, 1993); system investment decision behaviour (Clark and Soliman, 1999); IT adoption behaviour (Karahanna et al., 1999); and Internet use behaviour (Bobbitt and Dabholkar, 2001)

4) TRA integrates diverse theories of attitude (e.g., learning theory, expectancy-value theory, balance theory, congruity theory, dissonance theory, and attribution theory) to establish causal relationships between beliefs, attitudes, intentions and behaviours into a common framework.

5) TRA is capable of integrating other perspectives (e.g., theories or constructs) from the IS literature.

These reasons are also supported in the Fishbein/Ajzen's model (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980)

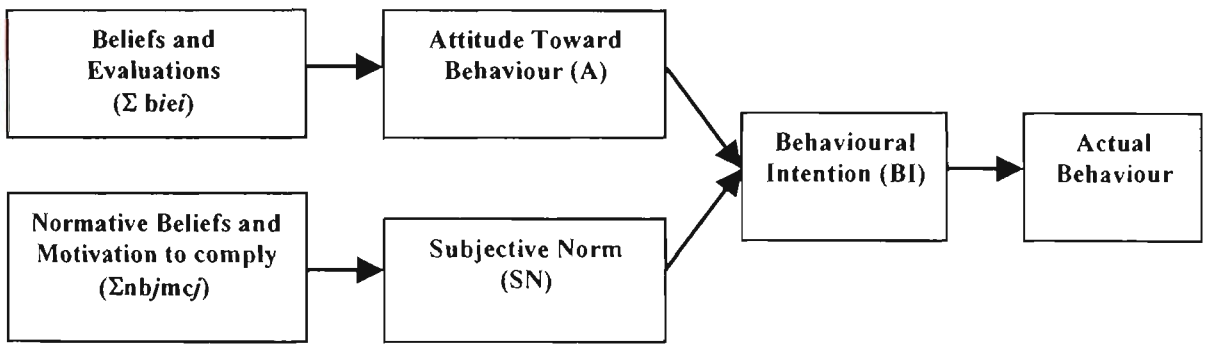
TRA assumes that "... human beings are usually quite rationale and make systematic use of the information available to them" (Ajzen and Fishbein, 1980, p. 5). This assumption is relevant because it indicates clearly that individuals must utilise available information before arriving at any behavioural decision. For example, the banking industry is a shareholder value maximiser and, hence, it is expected by shareholders to consider benefits/costs (e.g., gain relative advantage, improve organisational performance, improve customer/organisational relationship and easiness of the Internet to use) before engaging (or not engaging) in any specific behavioural decision. This means that any behavioural decision must undergo a hierarchical sequence of processes. The above view has led many researchers to focus on the relationship between cognition of the individual's behaviour and the development of attitude and intention towards performing the behaviour. In fact, Fishbein and Ajzen (1975) developed their concept, based on this relationship, to provide explanations about why people do (or do not) perform specific behaviour as well as provide suggestions for developing strategies about changing the specific behaviour (or a course of action) to obtain desirable results (Ajzen and Fishbein, 1980).

Fishbein and Ajzen (1975) originally developed the Theory of Reasoned Action (TRA). It was comprehensively refined and empirical evidence supports its validity and reliability (Ajzen and Fishbein (1980).

In developing a conceptual framework for TRA, Fishbein and Ajzen (1975) integrated various studies on attitude from social psychology. Their aim was to develop an integrated conceptual framework to predict and explain an individual's behaviour in a general situational setting. Their main criticisms were that there was a diverse view and measurement about an attitude and, hence, conflicting results could lead to confusion. In general, their argument was that existing studies lacked conceptual bases for measuring attitude. They argued specifically that individuals are rational in nature and that they evaluate their offer before they engage (or do not engage) in a behaviour. In sum, their study focused on issues related to an individual's behaviour.

In their conceptual framework, Fishbein and Ajzen (1975) specified three major determinants of behaviour: (1) behavioural intention (hereafter BI); (2) attitude (hereafter A); and (3) subjective norm (hereafter SN). They explained the behavioural intention model using these three major variables in a hierarchical sequence to facilitate understanding. They postulate that: (i) an individual's BI is the immediate determinant of behaviour; (ii) his/her attitude and subjective norm are mediated through BI; and (iii) his/her behavioural and normative beliefs are mediated through attitude and subjective norm respectively. Figure 3.1 illustrates the Theory of Reasoned Action (TRA).

Figure 3.1: Theory of Reasoned Action (TRA)



Source: Fishbein and Ajzen (1975); Ajzen and Fishbein (1980)

In TRA, actual behaviour is referred to as "...observable acts that are studied in their own right" of the individual (Fishbein and Ajzen, 1975, p. 335).

Fishbein and Ajzen (1975) recommended employing behavioural criteria such as single, repeated and multiple observations when measuring the relationship between an individual's BI and his/her behaviour. They defined: (1) a single-act criterion as a single observation of same specific behaviour at same target, situation and time; (2) repeated-act criterion as repeated observation of same specific behaviour but at

different target, situation and time; and (3) multiple-act criterion as observation (single or repeated) of several specific behaviours. The behavioural observation measure provides an indication of the occurrence of the behaviour.

However, Fishbein and Ajzen, (1975) argued that the accuracy of predicting the behaviour is influenced by:

(1) "... intention-behavior relation is the degree to which the intention is measured at the same level of specificity as the behavior to be predicted" (Fishbein and Ajzen, 1975, p. 369). This means that the variables determining the specific behaviour to be predicted should be defined and measured in terms of behaviour, target, context, and time elements. The greater the correspondence between an individual's BI and its determinants in the level of specificity, the higher the correlation between them.

(2) the degree of correspondence between the time of taking an individual's BI measurement and the time of observed behaviour. The longer the period between them, the more likely it is that a person will change his/her intention to perform the behaviour due to intervening events and emergence of new information; and

(3) the degree of correspondence between an individual's ability to perform the behaviour and the specified behaviour requirement. If the person lacks, for example, the skills, the resources and the cooperation of others required to perform the behaviour, then he/she will not perform the behaviour even though they want to.

Higher correlation between an individual's BI and behaviour means greater correspondence between them (Fishbein and Ajzen, 1975). This correlation measure indicates the accuracy of prediction of an individual's behavioural intention (BI).

The hierarchical sequence determining actual behaviour as per the TRA concept, namely: behavioural intention; attitudinal and normative influences; and beliefs structure are explained in the following discussion.

Based on the above argument, Fishbein and Ajzen (1975) assume that a person's behaviour is best predicted through his/her BI. They claim that BI is the immediate determinant of any given behaviour and asserted that it is sufficient to explain any individual's behaviour provided that his/her BI measure meets the behavioural criterion.[10] This means that the theory is only applicable to behaviours completely under volitional control. Fishbein and Ajzen (1975) consider BI as the strongest measure of a person's intention to perform a specific behaviour. The stronger the individual's BI the more likely a person is to perform the behaviour.

According to TRA, "... a person's intention is a function of two basic determinants, one personal in nature and the other reflecting social influence" (Ajzen and Fishbein, 1980, p. 6). They assume that BI can be determined jointly by two components, namely, a person's attitude and his/her subjective norm within the social environment. The first component deals with personal influences on the individual's BI and the second deals with social influences on the individual's BI (Fishbein and Ajzen, 1975). Equation (1) defines this relationship:

$$\mathbf{B \approx BI = A\,(w1) + SN\,(w2)} \qquad \mathbf{(Eq.\ 1)}$$

Where

B	=	Overt behaviour.
BI	=	A person's intention to perform (or not to perform) the specific behaviour.
A	=	A person's attitude towards performing the specific behaviour.
SN	=	Overall perceptions of what others want an individual to perform.
W1, W2	=	Determined weights to reflect importance.

[10] For example, "... correspond[s] to the behavioral criterion in terms of action, target, context, time-frame and/or specificity" (Sheppard et al., 1988, p. 325).

In equation 1, the authors (Fishbein and Ajzen, 1975) define BI as a person's subjective probability that he/she will perform (or not perform) a specific behaviour. The measure provides clear indication as to whether or not a person will be likely to perform a given behaviour. This means that the stronger the BI the more likely a person (e.g., bank manager) will perform (or not perform) a specific behaviour (e.g., the adoption of Internet technology in the banking industry).

In TRA, an individual's attitude (A) is referred to as "... individual's positive or negative evaluation of performing the behavior" (Fishbein and Ajzen, 1975, p. 6). This means that a favourable (or unfavourable) feeling about the specific behaviour is a major determinant of a person's intention formation. This measure will indicate the strength of a person's attitudinal influence on a BI to perform the specific behaviour. Subjective norm (SN) is also used to referr to "... the person's perception that most people who are important to him think he should or should not perform the behavior in question" (Fishbein and Ajzen, 1975, p. 302). The measure will indicate the strength of social influence on an individual's BI to perform (or not to perform) the specific behaviour. Fishbein and Ajzen view a person's (e.g., bank manager) attitude as the strongest determinant of his/her BI to perform or (not to perform) the specific behaviour (e.g., the adoption of Internet technology in the banking industry).

In determining an individual's BI, the relative importance of attitude and subjective norm are determined by given proportional weights (w1, w2) to reflect their importance (Fishbein and Ajzen, 1975). Ajzen and Fishbein (1980) claim that these weights can vary across people and situations. Davis (1986) elaborated on how proportional weights are determined by noting thus

> The important weights are estimated via multiple regression to reflect the relative causal influence of the attitudinal and normative components in a given situation, and are expected to vary across situations (p. 16).

Equation (1) seems a straightforward formula for predicting the individual's BI and hence indicating the likelihood of performing the specific behaviour. However, the components that determine A and SN need more explanation.

According to TRA, beliefs fall into two groups: (1) attitudinal beliefs and (2) normative beliefs. Fishbein and Ajzen (1975) postulate that a person's attitude towards performing the behaviour is influenced by attitudinal beliefs, while his/her subjective norm is influenced by normative beliefs. Hence, these beliefs (attitudinal and normative) affect an individual's BI and ultimately their behaviour. According to TRA, the component that underlies A deals with behavioural beliefs formation related to the outcome of performing the specific behaviour. Fishbein and Ajzen (1975) theorise that "... a person's attitude toward any object is a function of his beliefs about the object and the implicit evaluative responses associated with those beliefs" (Fishbein and Ajzen, 1975, p. 29). Thus, this means that a person forms behavioural influences automatically and simultaneously based on: (1) his/her salient beliefs that performing the specific behaviour will lead to salient outcome, which is based on subjective probability; and (2) his/her underlying evaluation of those outcomes. Salient beliefs are those important beliefs related to a person's (e.g., bank manager) subjective probability that performing the specific behaviour (e.g., the adoption of Internet technology in the banking industry) will lead to the best outcome (e.g., gain relative advantage, improve organisational performance, improve customer/organisational relationship, and ease of use) (Fishbein and Ajzen, 1975). Fishbein and Ajzen (1975) assume that the major determinants of attitude are: (1) the individual's perception about the outcome of performing the specific behaviour; and (2) the evaluation of those outcomes. They claim that beliefs are best understood under the expectancy-value theory that assumes individuals select the alternative choices that are likely to lead to the best outcome.

The expectancy-value theory shows the relationship between attitude, beliefs and evaluation of the outcome (refer to equation 2).

$$A = \sum_{i=1}^{n} b_i e_i \qquad \textbf{(Eq. 2)}$$

Where

b_i = Individual's subjective probability that performing the behaviour ***b*** will lead to the outcome $_i$.

e_i = Evaluation of the outcome $_i$.

n = Number of salient beliefs a person holds with respect to performing a specific behaviour ***b***.

Fishbein and Ajzen maintain that "... a person may hold a relatively large number of beliefs" with respect to performing a specific behaviour (p. 218). However, Davis (1986) elaborated on these views by highlighting that salient beliefs are only those that bear influence on a person's attitude. This means that only important beliefs should be considered. In sum, the strength of a person's salient beliefs that performing the specific behaviour will lead to salient outcome will indicate a person's behavioural influence on his/her BI with respect to performing (or not performing) the behaviour.

The other component that underlies SN deals with an individual's normative beliefs formation within the social environment, which are related to the expectations of relevant referents (e.g., shareholders, customers, suppliers, government) with respect to performing the specific behaviour. Fishbein and Ajzen (1975) assume that a person's subjective norm is a function of "the perceived expectations of specific referent individuals (or groups), and by the person's motivation to comply with those expectations" (Fishbein and Ajzen, 1975, p. 302). Thus, this means that: (1) the individual's normative beliefs that salient referents think that he/she should (or should not) perform the specific behaviour (e.g.,, the adoption of Internet technology in the banking industry); and (2) the motivation to comply with the wishes of the others will lead a person to develop normative pressures. Fishbein and Ajzen (1975) claim that a person's perception about what others wants him/her to do with respect to the specific behaviour and his/her motivation to comply with their wishes are important variables in the formation of SN.

Based on the expectancy-value theory, the relationship between SN, a person's normative beliefs, and motivation to comply with the wishes of others is shown in equation 3.

$$SN = \sum_{i=1}^{n} nb_j mc_j \qquad \textbf{(Eq. 3)}$$

Where

$\mathbf{nb}_j$ = Individual's normative belief that referent *j* wants him/her to perform a specific ***b***.

$\mathbf{mc}_j$ = Motivation to comply with referent ***j***.

n = Number of salient referents or others

Fishbein and Ajzen (1975) maintain that there are many referents (individual's or group) within the social environment, however, only important referents exert normative pressure on the individual's BI. In sum, the strength of a person's perception that salient referents think he/she should (or should not) perform the behaviour will indicate a person's normative influence on his/her BI with respect to performing (or not performing) the behaviour.

Sheppard et al. (1988) reviewed 87 empirical studies employing TRA. The aim of their study was to examine the predictive utility of TRA in a situation not within the conditions specified for the model. Specifically, they focused on two main issues: (1) the use of A and SN to predict BI; and (2) the use of BI to predict actual behaviour. In their meta-analysis they found an average correlation of 0.53 for the BI-behaviour relationship and 0.66 correlations for the A-SN-BI relationship. They indicated the predictive power of the Fishbein and Ajzen model even in a situation outside the boundaries of the conditions specified for the model. The findings of Sheppard et al. (1988) strongly supported the predictive ability of the TRA, concluding that TRA is a fairly good measure to predict and explain any future specific behaviour.

Although TRA has gained wide acceptance in the behavioural sciences and the IS literature due to its well integrated paradigm, the likelihood that a person will actually perform the specific behaviour has been questioned by many researchers (e.g., Warshaw and Davis, 1985; Davis et al., 1989). For example, in a situation where there is a gap between BI and actual behaviour, lower correlation was found between BI and actual behaviour in the studies (Bonfield, 1974; and Harrell and Bennett, 1974).

3.3 Theoretical and Empirical Studies Examining Theory of Planned Behaviour (TPB) - the Extension of TRA

Ajzen (1991) investigated the Theory of Planned Behaviour (TPB). The aim was to examine the relationship between individuals' intentions and their actions. The study focused on the prediction and explanation of a given course of action that is likely to be pursued by individuals.

Ajzen's main criticisms were that the Theory of Reasoned Action (TRA) was designed to predict and explain the behaviour (or action) based on the assumption that the behaviour is under a person's volitional control. His arguments were that: (1) actual performance of some behaviours require the availability of opportunities and resources and that there are some behaviours that are not under a person's (e.g., bank manager) volitional control; and (2) there are non-motivational factors that may influence a person's volitional control over the behaviour and hence may affect the performance of the target behaviour (e.g., the adoption of Internet technology in the banking industry). These volitional control problems were also noted by Ajzen and Madden (1986) and Sheppard et al. (1988) and were considered to be limitations of the original TRA model.

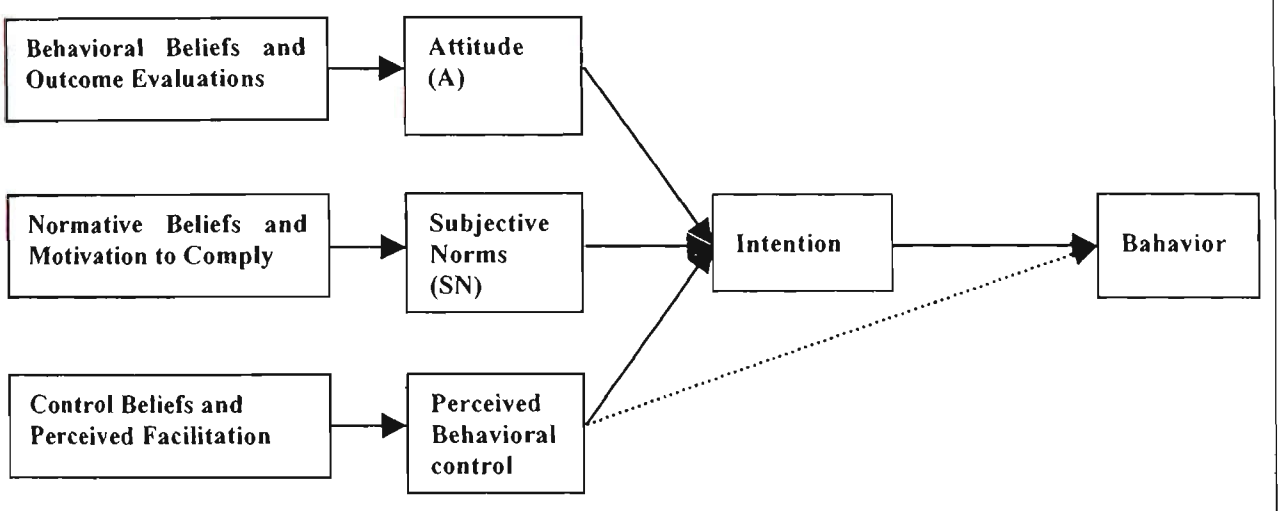
Ajzen (1991) argues that some behaviour that are not under a person's volitional control may be problematic for some people due to the differences in individuals' abilities and external forces. This may have influence on actual performance of the behaviour and, therefore, consideration should be given to the concept of behavioural control to overcome these volitional control problems.

Ajzen's study was based on the original TRA (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980) and Bandura's (1982) concept of "self-efficacy", which is related to the evaluation of "... how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). It concentrated on the non-motivational personal factors of for example, skills, abilities, knowledge, etc... and non-motivational external factors, e.g., time, opportunities, cooperation of others, etc... and their influences on the actual performance of the behaviour. This means that lack of opportunities and resources such as time, skills, knowledge, and

cooperation of others may present problems for an individual's volitional control over the behaviour and hence failure to perform the behaviour may result.

To overcome these volitional control problems, Ajzen (1991) extended TRA (Fishbein and Ajzen, 1975, Ajzen and Fishbein 1980) by adding another construct called perceived behavioural control (PBC). Figure 3.2 shows the TPB model, which is presented similarly to TRA.

Figure 3.2: Theory of Planned Behavior (TPB).



Source: [Adapted from Mathieson (1991) and Ajzen (1991)]

As in the original TRA, TPB assumes that BI is a function of two determinants: (1) the individual's attitude towards the behaviour; and (2) the subjective norm within the social environment. However, the inclusion of perceived behavioural control (PBC) was important. Therefore, attitude, subjective norms and perceived behavioural control form the TPB (see Figure 3.2). Ajzen (1991) provided two rationales for this: (1) it is expected that PBC will increase the likelihood of success in performing the behaviour; and (2) it is expected that PBC will provide a measure of actual control. However, the accuracy of PBC as a measure to predict the likelihood of achieving the target behaviour will depend on the individual's capability (e.g., having requisite opportunities and resources) to exercise control

over the specific behaviour. PBC refers to an individual's perception of the "... presence or absence of requisite resources and opportunities" (Ajzen and Madden, 1986, p. 457) required to perform the specific behaviour. Thus, this means that a person who believes that he/she has resources and opportunities expects fewer problems in performing the specific behaviour and hence perceives that they have complete control over the specific behaviour.

Ajzen (1991) claims that PBC is a function of control beliefs (CB) and perceived facilitation (PF). In TPB, CB refers to an individual's perception of the presence (or absence) of the requisite resources and opportunities required to perform the behaviour that reflects their confidence in terms of their ability to perform the behaviour. PF also refers to an individual's evaluation of the importance of these resources and opportunities to perform the behaviour that reflects their access to the available resources and opportunities required to perform the specific behaviour. Ajzen claims that the stronger the individual's perception about the behavioural control the more likely he/she will intend to perform the behaviour.

Equation (4) shows this relationship between PBC, a person's control beliefs, and his/her perceived facilitation of the opportunities and resources in relation to performing the behaviour.

$$\mathbf{PBC} = \sum_{k=1}^{n} \mathbf{cb}_k \mathbf{pf}_k \qquad \textbf{(Eq. 4)}^{11}$$

Where

$\mathbf{cb}_k$ = Control belief about the availability of opportunities and resources

$\mathbf{pf}_k$ = Perceived facilitation of opportunities and resources

$\mathbf{n}$ = Number of salient skills, opportunities and resources.

[11] This is an extention of TRA

The researchers (e.g., Ajzen, 1991; Ajzen and Madden, 1986) maintain that behaviour is influenced by both the individual's intention and the PBC. They strongly argue that: (1) in the case where individuals have complete volitional control over the behaviour, BI is adequate to predict the behaviour and hence PBC will not have significant contribution in the prediction; and (2) in the case where individuals have incomplete volitional control over the behaviour, PBC will have direct influence on behaviour and contribute significantly in the prediction of the behaviour. This means that in the first case PBC is influencing behaviour indirectly through intentions and, therefore, does not reflect actual control, whereas in the second case, PBC is influencing the behaviour directly and reflects actual control. Thus, this means that one should predetermine first whether the behaviour is under a person's volitional control or not before trying to predict the behaviour.

Ajzen (1991) reviewed several studies employing TPB and found support for the TPB. More evidence was found in various situational settings. Examples of these studies are: task performance (Locke et al., 1984); attending class and weight loss (Shifter and Ajzen, 1985); obtaining grade A (Ajzen and Madden, 1986); investment decisions (East, 1993); consumer behaviour (Spark and Shepherd, 1992); dishonest behaviour (Beck and Ajzen, 1991); ethical behaviour (Randall and Gibson, 1991; Kurland, 1995) leisure activities (Ajzen and Driver, 1992); self-schemas (Sheran and Orbell, 2000); executives' adoption of IT in small business (Harrison et al., 1997); adoption of virtual banking (Liao et al. 1999); learning to use Internet (Klobas and Clyde, 2000); Internet purchases (George, 2002). However, Liao et al. (1999) did not find support for the TPB. Moreover, research studies (Randall and Gibson, 1991; Beck and Ajzen, 1991; Kurland, 1995) found weak support for the TPB.

Although Ajzen (1991) was clear in defining PBC, however, these above studies showed mixed results and hence were confusing.

3.4 Theoretical and Empirical Studies Examining Technology Acceptance Model (TAM)

The purpose of this section is: (1) to provide the reader with a background to the technology acceptance model TAM; and (2) to understand how TAM could provide understanding of Internet technology adoption in the banking industry of Australia and Oman as discussed in Chapter 1.

The TAM can be defined as a theoretical model that evaluates "... the effect of system characteristics on user acceptance of computer-based information systems" (Davis, 1986, p. 7). Major benefits of using TAM are two fold: (1) it provides IS designers with information about how and where to modify design to enhance IS acceptance to use IS; (2) it provides IS implementers with information about how and where to manage IS implementation. The information obtained from TAM could assist in forming a strategy to design and implement a successful IT/IS.

The importance of understanding IS usage behaviour was stressed in most of the IS literature. For example, Davis et al. (1989) pointed out that

> Computer systems cannot improve organisational performance if they aren't used. Unfortunately, resistance to end–user systems by managers and professionals is a widespread problem. To better predict, explain and increase user acceptance, we need to better understand why people accept or reject computers (p. 982).

In addressing this issue a major challenge is posed for both practitioners and academics in terms of understanding specific behaviour (e.g., adoption or lack of adoption of Internet technology in the banking industry). Indeed, in the past two decades, significant work has been generated to contribute to the understanding of this specific behaviour. Particularly, as indicated in the previous literature, TAM emerged "... to resolve the previous mixed and inconclusive research findings associating various beliefs and attitudes with IS acceptance" (Szajna, 1996, p. 86).

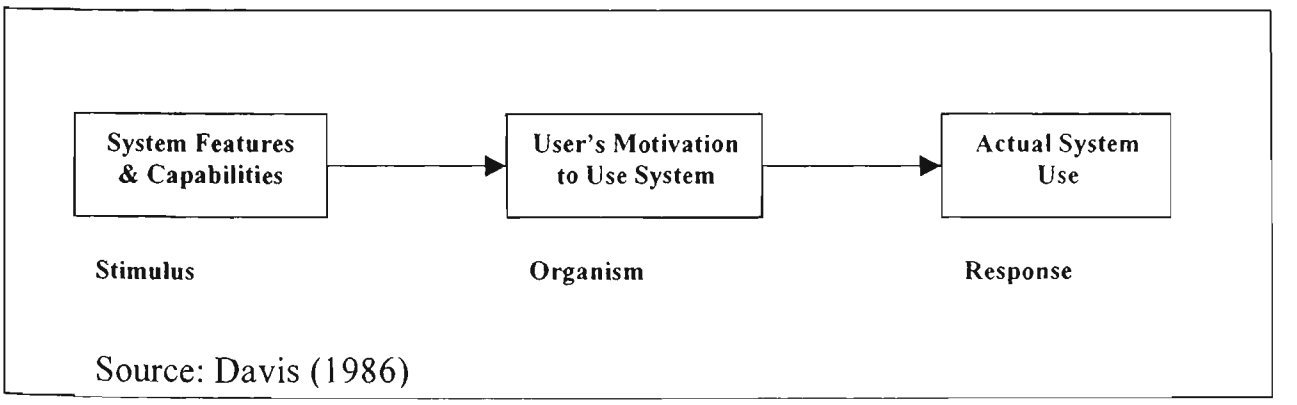
In a similar fashion to TRA, TAM assumes that a computer user is generally quite rational and uses information in a systematic manner to decide whether (or not) to use IT/IS in the workplace. Based on this assumption Davis (1986) originally developed TAM.

The main aim of TAM was

> ... to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behavior across a broad range of end-user computing technologies and user population, while at the same time being both parsimonious and theoretically justified (Davis et al., 1989, p. 985).

In attempting to fulfil this aim, Davis's (1986) conceptual framework proposed that a user's motivational factors are related to actual IT/IS usage and, hence, act as a bridge between IT/IS design (e.g., system features and capabilities) and actual IT/IS usage (see Figure 3.3). This means that information obtained from the prediction of actual usage at the early stage will guide IS designers and implementers to enhance the chance of implementing IT/IS successfully or even avoid the risk of failure. In the conceptual framework, Davis (1986) assumes that stimulus variables (e.g., system features and capabilities) trigger organism factors (e.g., user's motivation to use IT/IS) and in turn users respond by actually using the IT/IS.

Figure 3.3: Conceptual Framework



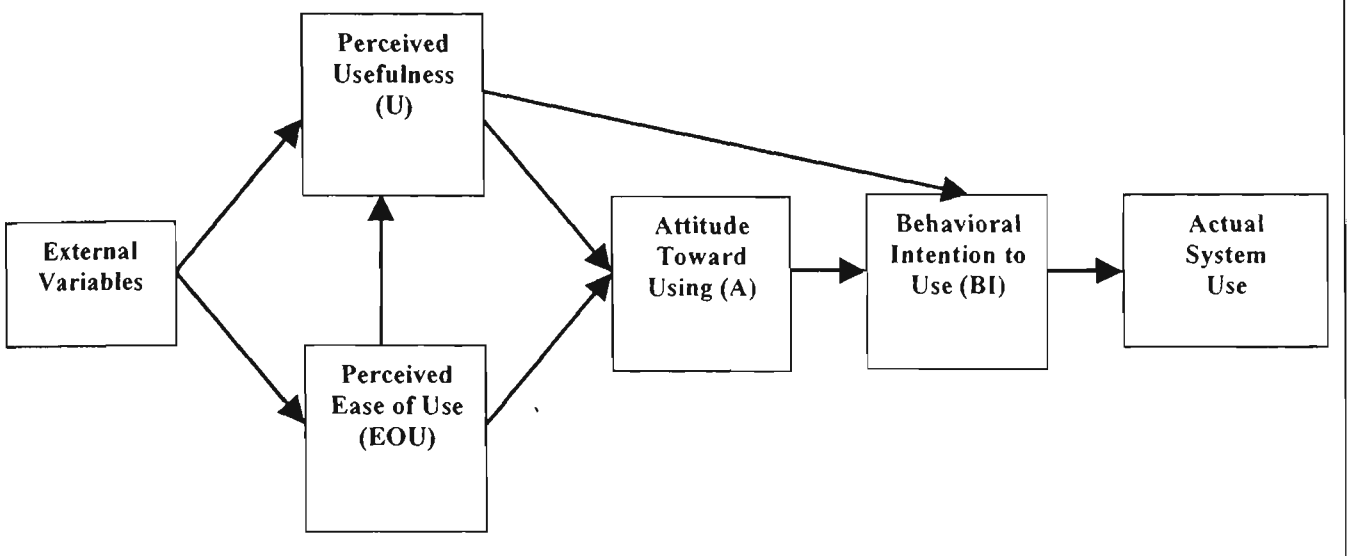
Source: Davis (1986)

Swanson (1988) acknowledged the importance of bridging the gap between the IS design and utilisation of IS. Indeed this conceptual framework provides a significant insight into the way of thinking about linking a manager's motivational factors with the actual adoption of Internet technology in the banking industry to explain Internet technology adoption (e.g., or lack of adoption) in the banking industry. This study will adapt this concept to link stimulus factors, organism factors and response factors related to Internet technology adoption in the banking industry because it provides a way of thinking about Internet technology adoption (or reluctance to adopt) in the banking industry.

In the original TAM, Davis (1986) argued for an effective measure of a user's acceptance (or lack of acceptance) of IS to guide practitioners on how to make a choice as well as to avoid risks (e.g., losing resources) at the early stage of implementation. His main criticism was that IS lacks a reliable and valid measure to predict and explain IS adoption (or lack of adoption) behaviour as indicated in the earlier literature.

In developing TAM, Davis (1986) identified three major determinants of IT/IS acceptance (or adoption) suggested by previous research studies related to cognition and effectiveness. He adapted TRA (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980) as a theoretical basis to theories of the causal links between perceived usefulness (U), perceived ease of use (EOU), attitude (A) toward using IT/IS, and behavioural intention (BI) to explain IT/IS acceptance (or adoption). Figure 3.4 Illustrates Davis's (1986) TAM.

Figure 3.4: Technology Acceptance Model



Source: Davis (1986)

As with TRA, in TAM Davis (1986) assumes that computer users' behavioural intention (BI) primarily determines the likelihood that computer users would actually accept or adopt a specific IT/IS. However, he argues that computer users' attitude (A) and subjective norm (SN) do not determine their BI but, rather, this is jointly determined by perceived usefulness (U) and A. This relationship is defined in the equation (1) below:

$$\mathbf{BI = A\,(w1) + U\,(w2)} \qquad \textbf{(Eq. 5)}^{12}$$

Where

BI = A person's intention to use (or not to use) the IS.

A = A person's attitude towards using the IS.

U = A person's belief that using a particular IS would enhance his work performance in the organisation.

---

[12] This is a development from TRA (with the inclusion of U and exclusion of SN).

W1, W2 = Determined weights by regression to reflect importance. Davis (1986) indicated that "... statistically estimated (e.g., via regression) weights often predict as well as or better than their self-stated counterparts ... and provide a representative picture of the cognitive activity underlying judgmental processes" (p. 477)

In Equation 5, BI is referred to as a measure of one's strength of intention to accomplish the specific behaviour (i.e., adoption of Internet technology) (Fishbein and Ajzen, 1975 and Ajzen and Fishbein, 1980). Several authors (e.g., Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Davis et al., 1989) asserted that BI is the strongest measure of peoples' actual behaviour. The results of previous studies examining TRA and TPB indicated that BI is a good predictor of actual behaviour (e.g., Internet technology adoption). However, the authors raised the possibility that people may change their BI over time due to lack of resources and capabilities. Davis's (1986) TAM defined computer users' BI as people's likelihood that they would actually perform (or not perform) the specific behaviour (e.g., actual IS usage). This means that once people form intentions, the plan would have also been formulated in their mind either to use (or not to use) the specific IS. The formulation of the plan in people's minds would indicate the degree to which they have (or have not) actually formed intentions (Davis and Warshaw, 2001).

Although the relationship between PU and BI is not essential in TRA, Davis (1986) argued that people form intentions toward adopting (or not adopting) IT/IS because they expect both benefits and costs (e.g., to reduce cost or increase cost) from the adoption of the IT/IS. This relationship represents peoples' intentions to adopt (or not to adopt) the IT/IS, based on the concept that the IT/IS adoption would enhance their work performance and hence might receive extrinsic rewards (e.g., promotion) for their best performance in the organisation. Similarly, in the case of the banking industry, bank managers would decide to adopt Internet technology in the banking industry if they expected that Internet technology adoption would enhance a bank's relative advantage, performance, customer/bank relationship and was possible to make easy to use. If Internet technology adoption became successful they would also expect to be promoted in return for their good work.

The authors (Fishbein and Ajzen, 1975) also referred to A as one's feelings (e.g., positive or negative) toward accomplishing the target behaviour. Perceived U

according to Davis (1989, p.320) is referred to, as "... the degree to which a person believes that using a particular system would enhance his or her job performance".

In TAM, Davis (1986) excluded the SN because he believed that it is difficult to understand its relationships with other components such as A and BI. In attempting to understand the underlying structure of SN and its relationship with other components of TRA, several empirical works emerged to uncover its complexity. For example, the findings of two studies (Thompson et al., 1991; Green, 1998) indicated a strong normative influence on IT/IS usage. On the other hand, Miniard and Cohen (1981, 1983) argued that there is a possibility that social reasons will be reflected in the attitudinal component. Supportive evidence for normative influence on attitudinal components was found in studies (Shimp and Kavas, 1984; Taylor and Todd, 1995a) examining the crossover effect. Another body of research found evidence of attitudinal influence on the normative component (e.g., Oliver and Bearden, 1985). Moreover, the studies from IT/IS literature found that normative influences had no significant effect on computer usage (e.g., Davis et al., 1989; Mathieson, 1991) whereas in other studies normative influence was found to be significant (e.g., Thompson et al., 1991; Green, 1998). Other studies (Davis et al., 1989; Adams et al., 1992; and Mathieson, 1991) found the subjective norm scale suggested by Fishbein and Ajzen (1975) difficult to employ.

According to TAM, Davis (1986) further postulates that computer users' attitudes (A) towards the IT/IS is, in turn, jointly determined by their perceptions of IT/IS usefulness and ease of use. He argued that both perceptions (U and EOU) would be mediated to BI through A. This relationship is defined in the equation (6) below:

$$\mathbf{A = U + EOU} \quad \textbf{(Eq. 6)}$$

Where

EOU = A person's subjective likelihood that using the IT/IS would enable people to perform the same job with less effort than traditional methods.

Unlike TRA, TAM treats the two beliefs (U and EOU) as distinct to allow academics to trace the effect of external variables (Davis, 1986).

In Equation 6, Davis et al. (1989, p. 320) refer to perceived EOU as "...the degree to which a person believes that using a particular system would be free of effort". They maintained that this construct was similar to Bandura's (1982) self-efficacy concept discussed earlier in this study. It is also quite similar to the concept of perceived behavioural control defined in Ajzen's (1991) TPB. This construct is concerned with the extent to which an individual believes that using the IT/IS will actually reduce the effort required to accomplish the same job (e.g., less steps to process the job).

Davis (1986) maintains that perceived U is determined by external variables and perceived EOU. H argues that perceived U mediates the effect of external variables and perceived EOU to both A and BI. This relationship is defined in the equation (7) below:

U = External + EOU (Eq. 7)

Equation 7 suggests that U could be influenced by EOU and external variables. This means that system design features can have a direct effect on U and an indirect effect through EOU. Previous studies (Benbasat and Dexter, 1986) observed the link between system characteristics and U.

Subsequently, Davis postulates that external variables have a direct effect on perceived EOU. He argues further that perceived EOU mediates the effect of external variables to both U and A. This relationship is defined in the equation (8) below:

EOU = External (Eq. 8)

Where

External variables = System features (e.g., menus, screen layout, training, documentation, system support, etc...).

Davis (1986) and Davis et al. (1989) indicated that strategies could be formulated to improve these two distinct perceptions (usefulness and ease of use) such as focusing on improving user's interface or user training. For example, Agarwal and Prasad (1998) emphasised the importance of studying the antecedence variables associated with these two fundamental perceptions, pointing out that there has been very little work done to explore what influences these two perceptions.

An examination of the role of intrinsic motivation conducted by Venkatesh (1999) revealed that it is possible to create favourable users' perceptions. Interestingly, he indicated that the cost associated with training users is much lower than that of redesigning the system. He emphasised the importance of perceived ease of use in predicting IT/IS adoption and He argued that training could influence this perceived ease of use and suggested that favourable perceptions could be developed through training. This means that favourable perceptions could be shaped through the process of training and hence increases the chance of IT/IS adoption. The findings of the author suggested that appropriate training could increase favourable users' perceptions and hence users' intentions to use the IT/IS.

In sum, for reliability and validity, many studies (e.g., Davis, 1989; 1989; Segars and Grover, 1993; Taylor and Todd, 1995a) examined TAM across various IT/IS. These studies found TAM to be a reliable and valid model for predicting and explaining IT/IS adoption or acceptance behaviour. Various studies utilised TAM to assess users' acceptance or rejection of various computer technologies such as microcomputers (Igbaria et al., 1995), Dos and Windows (Speier et al., 1995), word processing software (Davis et al., 1989, Adams et al., 1992; Davis and Venkatash, 1996; Venkatash and Davis 1996; Hendrickson and Collins, 1996), spreadsheet (Mathieson, 1991), groupware (Taylor and Todd, 1995b), database management systems (Szajna, 1994), e-mail (Davis, 1989; Szajna, 1996; Adams et al., 1992) and World Wide Web (Lederer et al., 2000). Other studies extended TAM by including other variables such as perceived credibility (Wang et al. 2003), gender difference (Gefen and Straub, 1997), and enjoyment (Al-Gahtani and King, 1999).

In comparing TRA and TAM, Davis et al. (1989) examined user acceptance of IT/IS. They argued that computer investments could be risky if computers were not used extensively. In their study, they addressed five main factors that have the potential to influence computer technology acceptance or adoption, namely: people's intentions; their attitude; their subjective norms; their perceived usefulness; and their perceived ease of use to explain computer technology acceptance. From an analysis of 107 responses obtained from Master of Business Administration (MBA) students who used Word Processor and WriteOne programs in two computer labs, they reported very interesting results, as follows.

(1) In comparing TRA and TAM, Davis et al. (1989) found that both models predict IT/IS adoption or acceptance fairly well, however, they indicated that TAM was much easier to employ.

(2) Perceived U was the strongest influence of computer uses' intentions.

(3) Perceived ease of use was largely influencing users' intentions indirectly through U, suggesting that perceived ease of use is an antecedent to perceived U.

(4) Subjective norms had no significant effect, supporting Davis's (1986) argument to drop the subjective norm from the original TAM.

(5) Attitude partially mediated the effects of these two perceptions (perceived ease of use and usefulness) suggesting that users' attitudes should be dropped from TAM.

Davis et al. (1989) provided insights into how to streamline TAM in a very simple way to understand IT/IS adoption. Specifically, TAM is designed for user acceptance of IT (Adams et al., 1992; Davis and Venketesh, 1996; Igbaria et al., 1997) and "TAM has proven to be successful in predicting and explaining usage across a variety of systems" (Igbaria et al., 1997, p.281).

In a 1989 study, Davis developed a measurement scale to examine what he regarded as the most significant factors (perception of usefulness and ease of use) which have the potential to affect IT/IS adoption. From an analysis of 152 responses and, consistent with Davis et al. (1989), he found strong correlation between perceived

usefulness, perceived ease of use and usage. Specifically, he reported perceived usefulness to have far greater influence on behavioural intention than perceived ease of use. Indeed, these findings suggested ease of use to be an antecedent to perceived usefulness.

However, the study of Adams et al. (1992), which replicated the study of Davis (1989), examined perceived usefulness and ease of use to predict IT/IS acceptance or adoption for the purpose of reliability and validity. In evaluating the psychometric properties of these two perceptions and their relationship to IT/IS adoption or acceptance, they focused on two studies. In Study 1, they focused on utilising two messaging technologies: voice and electronic mail, and, in Study 2, they focused on utilising popular software packages: WordPerfect, Lotus 1-2-3 and Harvard Graphics. From an analysis of 118 responses, they reported in Study 2 to have opposite results from those reported by Davis (1989). In their conclusion, they emphasised that the relationship between perceived usefulness, ease of use and IT/IS acceptance is more complex than was basically assumed in TAM.

Also Karahanna and Limayem (2000) examined the use of electronic (e-mail) and voice mail (v-mail) systems in business organisations and found mixed results. From an analysis of (211 e-mail users and 173 v-mail users) responses obtained from a survey, they found results contradicted the previous studies' findings (Davis, 1989). For example, there was lack of significant correlation between perceived usefulness and e-mail usage. Their explanation for the lack of significant correlation was that strong social pressure might have influenced participants to use e-mail technology, regardless it had benefit or not.

Another study found inconsistency with the findings obtained from the studies (Davis et al., 1989; Davis, 1989) examining TAM. In a 1997 study, Igbaria et al. examined personal computing acceptance in small firms in New Zealand. They concentrated on the two fundamental perceptions (perceived usefulness and ease of use) of TAM suggested by the authors (Davis, 1986; Davis, 1989). From an analysis of 358 responses, they found results that were opposite to what other studies (Davis et al., 1989; Davis, 1989) had reported, i.e. that perceived ease of use had greater influence on usage.

In a study in 2003, Chau and Lai investigated the determinants of users' acceptance of Internet technology in the Hong Kong banking industry, and argued that it is important to understand what factors would influence a customer's decision to adopt or not to adopt the Internet technology in the banking industry. The authors concentrated on the two fundamental perceptions suggested by Davis (1986) and Davis et al. (1989) and their antecedents including: personalization, alliance services, task familiarity and accessibility. From an analysis of 160 responses obtained from a survey, they reported mixed results related to the relationship between the two fundamental perceptions of TAM and intentions to adopt Internet technology in the banking industry. They found that perceived ease of use was a major determinant in TAM rather than perceived usefulness — the opposite of what Davis and others had postulated in TAM. They also found that the antecedents, including: personalization; alliance services; and task familiarity are associated with perceived usefulness and that accessibility is associated with perceived ease of use. The authors suggested that these two fundamental perceptions of TAM be investigated further in the banking industry.

Another study of Internet technology adoption in the banking industry, was put forward by Wang et al. (2003), who examined the determinants of user acceptance of Internet technology in the Taiwan banking industry. They argued that the two TAM fundamental perceptions (perceived ease of use and usefulness) may not fully explain the user's behaviour, therefore they included another construct perceived credibility. Wang et al. noted, this construct expresses security and privacy concerns. Their study also examined computer self-efficacy as antecedent to the three perceptions (usefulness, ease of use, and credibility). The authors highlighted further that computer self-efficacy is related to how well users are experienced using the computer. From an analysis of 123 responses obtained from a telephone interview, they observed that perceived ease of use had stronger influence than perceived usefulness and credibility on users' intentions to use Internet technology in the banking industry. They also observed that perceived credibility had stronger influence than usefulness on users' intentions to use the Internet banking technology. The authors suggested that it is also important to focus on providing valuable functions and trustworthy protection of security and privacy of the banking services on the Internet. Their findings also indicated that the formation of these perceptions could be managed through proper training and promotion rather than focusing on redesigning Internet banking technology. This study also showed further mixed results in the banking industry in regard to the relationship between the two fundamental perceptions of TAM and user usage.

Another interesting study was conducted by Anandarajan et al. (2000) who examined technology acceptance in the banking industry in the developing country of Nigeria. The aim of their study was to investigate the issue of an individual motivation and Information Technology acceptance and usage and they argued for effective usage of IT in the less developed countries. The criticisms raised in their study were that in less developed countries IT is not used effectively. The theoretical underpinning of their study was whether or not individual motivation can influence IT acceptance and hence usage. This study identified the factors, which motivate individuals to accept IT as: (1) Perceived usefulness; (2) Perceived enjoyment; (3) Social pressure; and (4) Perceived ease of use. From an analysis of 125 responses from the major banks in Nigeria obtained from interviews, Anandarajan et al. found that (1) social pressure was the strongest influence on IT usage; (2) perceived ease of use was the second strongest on IT usage; and (3) perceived usefulness and enjoyment had no direct influence on IT usage. Their findings also revealed mixed results.

In sum, although several authors (Davis et al., 1989; Venkatesh and Davis, 2000) asserted that TAM is a good model for predicting user behaviour in the IT/IS, the above studies showed mixed results. Moreover, most of the above studies concentrated on the two fundamental prescriptions of TAM with the exception of the study by Wang et al. (2003), which included perceived credibility in TAM. However, the aim of this study is to explore the research question

what were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

Therefore, these two fundamental perceptions of TAM may not fully solve the problem in the Omani banking industry.

3.5 Theoretical and Empirical Studies Examining Diffusion of Innovation Theory.

In this section the aim is to understand the theory behind the diffusion of innovation in a general context as well as and in the banking industry, in order to understand better the research question

what were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

In fact, this section extends the discussion around the search for a theoretical framework to assist in understanding the real problem mentioned above.

Rogers (1995) highlighted the fact that the importance of understanding the diffusion and adoption of an innovation. He noted that the diffusion and adoption of an innovation are very difficult to achieve, even though it has obvious benefits for consumers and organisations.

Rogers as have defined diffusion of an innovation

> ... the process by which an innovation is communicated through certain channels over time among the members of social systems. It is a special type of communication, in that the messages are concerned with new ideas (p. 5).

In the diffusion process, he stressed the importance of communication in an attempt to educate the customer about the innovation concerned. In the diffusion of innovation, Rogers identified four main elements, namely: (1) an innovation; (2)

communication channels; (3) time; and (4) the social system. Rogers suggested that consumers' reactions to the innovation be measured based on how an innovation is different, how well it is communicated, how long it takes to persuade customers to adopt it, and how well the social system is structured to achieve a common goal. According to Rogers the four elements of the diffusion of innovation provide an indication of how an innovation is passed to the consumer from first knowledge of an innovation to the final adoption or rejection of the innovation.

The adoption decision of an innovation such as Internet technology in the banking industry is defined as

> ... the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation and use of the new idea, and to confirmation of this decision (Rogers, 1995, p.21).

The decision not to adopt an innovation relates to the rejection of the available new idea. However, in order to explain the rate of adoption of innovations, Rogers suggested the measurement of perceived characteristics of innovations, identifying five measures of adoption of innovation, namely: (1) perceived relative advantage; (2) perceived compatibility; (3) perceived complexity; (4) perceived trialability; and (5) perceived observability. Rogers (1995) postulated that the adoption of innovations is influenced by these five main characteristics of innovations. These five factors according to Rogers can explain the rate of adoption (e.g., Internet technology adoption in the banking industry).

Moore and Benbasat (1991) indicated that perceived relative advantage is similar in notion to perceived usefulness and perceived complexity is similar in notion to perceived ease of use identified by Davis (1986) and Davis et al. (1989) in TAM.

Several researchers examined these five factors in the context of IT/IS and found partial support for the diffusion of innovation theory and some interesting studies

emerged (Tornatzky and Klein, 19182; Moore and Benbasat, 1991), associated with the adoption of IT/IS.

The first study was a 1982 Tornatzky and Klein study, which examined the relationship between the characteristics of innovations and the adoption of innovation suggested by Rogers. It noted that to explain the adoption of innovation behaviour it is important to understand the characteristics of innovation. Tornatzky and Klein focused on the five fundamental perceptions of the characteristics of innovation. From a meta-analysis of 75 studies examining the innovation characteristics, they reported that three perceived characteristics of innovation (relative advantage, complexity and compatibility) were found to be significant across a range of innovation types.

A second study came from Moore and Benbasat (1991) who examined the adoption of IT/IS innovation in the context of personal workstations (hereafter PC). They argued that previous studies examining the characteristics of innovation lacked consistency. In their study they differentiated adopters from non-adopters by specifying that adopters have more positive perceptions of IT/IS than non-adopters. They focused on the five fundamental characteristics of innovations postulated by Rogers as well as three more variables including: image, voluntariness of use and visibility. From an analysis of 540 responses they reported relative advantage to have greater significance for IT/IS adoption. They also indicated that other variables such as: compatibility; ease of use; visibility; and voluntariness could be important. However, image and voluntariness were found to be not important.

Another interesting study was carried out by Tan and Teo (2000) who examined the influence of characteristics of innovation suggested by Rogers as well as other factors, including: subjective norms; and perceived behavioural control suggested by (Fishbein and Ajzen, 1975; Ajzen 1991 respectively). In their findings, they revealed that perceived characteristics of innovation and perceived behavioural control had a more significant influence than social influence on Internet technology adoption in the banking industry.

Complementing Tan and Teo (2000), Brown et al. (2004) utilised in their investigation the characteristics of innovation suggested by Rogers plus other factors

to examine the influence of these factors on Internet technology in the banking industry in Singapore and South Africa. Their findings supported Roger's characteristics of innovation.

Ruyter et al. (2001) also investigated the adoption of electronic services in the Netherlands. They concentrated on the impact of organisational reputation, relative advantage, and perceived risk on perceived service quality, trust, and behavioural intentions of customers. From an analysis of 202 responses they reported that perceived organisational reputation, perceived relative advantage, and perceived risk have a significant influence on consumers' behavioural intentions.

In sum, many authors (Moore and Benbasat, 1991; Tan and Teo, 2000; Brown et al., 2004) have indicated that the diffusion theory provided insights into the prediction of IT/IS adoption behaviour. However, the above studies show that diffusion theory has been extended to include other variables, depending on the situational environment.

3.6 Summary of the Chapter

In an attempt to explore the research question

what were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

the researcher of this study explored the available theoretical framework in Sections 3.2, 3.3, 3.4, 3.5. These theoretical frameworks (i.e., TRA, TPB, TAM, and DIT) provided insights into how perceptions could affect managers' decisions in the banking industry to adopt (or not to adopt) Internet technology. Although these models suggest that managers' decisions could be understood through their perceptions, however, the studies examining these models found mixed and inconclusive results for example, in TRA (Bonfield, 1974) in TPB (Liao et al.,

1999); and in TAM (Anandarajan et al., 2000). In the case of DIT only partial support was found (Tornatzky and Klein, 1982).

In addition, most of the researchers concentrated their examinations on these theoretical frameworks in small situational settings (e.g., laboratory and small firms) and targeted small IT/IS systems (e.g., Word Processor, Spreadsheet and E-mail) only few (e.g., Tan and Teo, 2000; Brown et al., 2004) targeted Internet technology in the banking industry. None of the above studies integrated the four factors (RA, P, CR, and EOU) jointly within the DIT in the banking industry.

This study is important because it investigates the real problem of Internet technology adoption in the Omani banking industry (non-adopter) where a high cost of investment is involved. Therefore, it will concentrate on developing a theory that would best represent the context of the banking industry (e.g., Oman and Australia) to understand Internet technology adoption in the banking industries (developing and developed).

More importantly, the extant literature in Chapter 2 and 3 provided insights into shaping the research question as

what were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

This research question already introduced in Chapter 1, will be utilised (e.g., in Chapter 4, 5, and 6) to guide this research accomplish the aim of this thesis.

Chapter Four: Qualitative Research Methodologies, Design And Sites Description

4.1 Introduction

In an attempt to understand Internet technology adoption, the research issues and framework in the extant literature were explored in the two previous Chapters (2 and 3). The extant literature review (in Chapters 2 and 3) suggested:

(1) There is lack of research on Internet technology adoption in the banking industry in developing countries.

(2) Very little attention was paid to variables: perceived organisational performance (hereafter P) and perceived customer/organisational relationship (hereafter CR). Moreover, none of the reviewed studies examined the four variables, namely: perceived relative advantage (hereafter RA); perceived organisational performance (hereafter P); perceived customer/organisational relationship (hereafter CR) and perceived ease of use (hereafter EOU) together to understand Internet technology adoption in the banking industry.

(3) Most of the reviewed extant literature used an improper sample selection.

(4) Most of the reviewed extant literature used a quantitative research methodology.

In sum, none of these studies (reviewed in Chapter 2 and 3) addressed adequately the issue of Internet technology adoption in a way that could solve the existing problem in the Omani banking industry (ie., lack of Internet technology adoption).

This Chapter draws upon the two previous chapters (2 and 3) to address adequately the issues of Internet technology adoption in the banking industry.

In exploratory research Perry (2001) suggested the development of a research question in order to guide the research (e.g., research methodologies and research design). This study will utilise the following research question as a guide.

What were the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

This Chapter describes the appropriate qualitative research methodologies and design used to collect and analyse the evidence, which would be utilised for understanding the Internet technology adoption in the banking industry adequately in the subsequent Chapters (5 and 6).

Specifically, this study will use exploratory research (e.g., theory building). In discussing management research Easterby-Smith et al. (2002) made a distinction between exploratory and explanatory research. These two are different because they have different purposes. For example, Perry (2001) indicated that if the aim were to explain phenomenon, then the researcher (e.g., with positivist belief) would have to predefine variables/propositions and use statistical methods (quantitative methods) to accomplish the aim. On the other hand, if the researcher's wishes were to develop a theory in order to understand occurring phenomena, then he/she (e.g., with interpretivist beliefs) would be more concerned to understand the issues surrounding the phenomena/behaviour and use interpretative methods (qualitative methods) to achieve the aim (Perry, 2001).

To accomplish the aim of this study, this Chapter describes the qualitative research methods and procedures used in this study as follows:

Section 4.2 Guidelines for selecting research methodologies

Section 4.3 Guidelines for gathering evidence from the field

Section 4.4 Guidelines for analysing field evidence and drawing conclusions

Section 4.5 Guidelines for ensuring confidentiality, validity, and generalisability

Section 4.6 Sites description

Section 4.7 Summary of the Chapter

4.2 Guidelines for Selecting Research Methodologies

Qualitative research is important in understanding and explaining IT/IS phenomena such as Internet technology adoption (Myers, 1997).

Creswell (1998, p.15) defined qualitative research as

> ... an inquiry process of understanding based on distinct methodologist traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting.

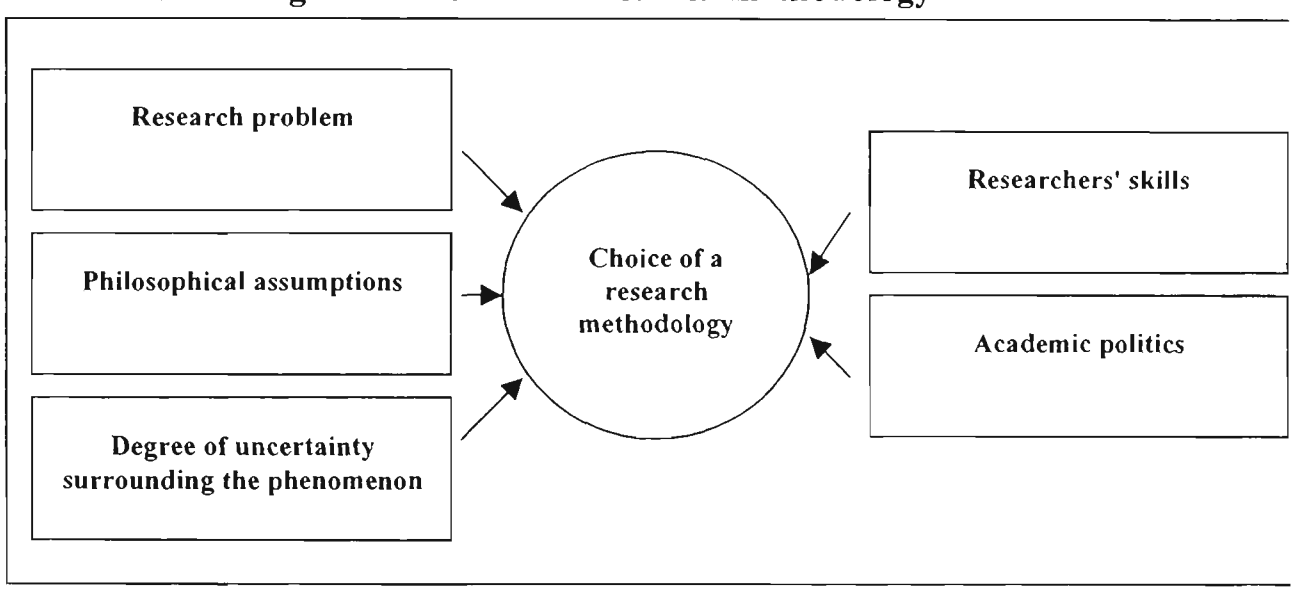
Myers (1997) indicated that IT/IS researchers nowadays are shifting focus from technological to managerial and organisational issues related to IT/IS. He argued that research methods are classified in many ways. However, he made a clear distinction between quantitative and qualitative research methods based on their application. For example, the author indicated that quantitative research methods are associated with the natural sciences (e.g., survey methods, laboratory experiments, formal econometric methods and other mathematical methods) that are intended to investigate natural phenomena. Whereas, qualitative research is a non-scientific study (e.g., action research, case study, and enthography), which is associated with, social and cultural investigation. Myers, for example, also made other distinctions. For instance, unlike quantitative research methodology, qualitative research methodology is mostly associated with subjectivity of focus on issues and mostly concerned with discovery of general theory. Moreover, Myers (1997); Ngwenyama and Lee (1997); and Trauth (2001) suggested that qualitative research methods have the potential to facilitate deeper understanding and explain phenomena in the IT/IS field.

Indeed, understanding and explaining managers' adoption behaviour as regards to Internet technology in the banking industry would require deeper understanding of their perceptions of relative advantage, organisational performance, customer/organisational relationships and ease of use.

Therefore, this study will employ qualitative research methodologies to investigate the two broad questions addressed in Chapter 1. It is thus meant to explore and explain a real situation associated with Internet technology adoption in the banking industry of Australia (adopter of Internet technology) and Oman (non-adopter of Internet technology).

The choice of a research methodology is influenced by many factors. For example Trauth (2001) identified five factors influencing the choice of a research methodology in the IT/IS including: (1) the research problem; (2) philosophical assumptions; (3) the degree of uncertainty surrounding the phenomenon; (4) the researchers' skills; and (5) academic politics. Figure 4.1 highlights these factors that could have an impact on choosing a research methodology.

Figure 4.1 Factors influencing the selection of a research methodology



Source: Developed from Trauth (2001).

These factors are discussed in the Sub-sections 4.2.1, 4.2.2, 4.2.3, and 4.2.4.

4.2.1 The Research Problem

Trauth (2001) argued that the choice of a research methodology is mostly influenced by the research problem because the research objective determines the direction of the research. Yin (2003) also indicated that the research question could influence the choice of research methodology. In this study qualitative research methodology will be employed to address the major research question indicated above.

4.2.2 The Philosophical Assumptions

The appropriateness of the research methodology also depends on the underlying assumptions. For example Guba and Lincoln (1994) suggest the underlying assumptions of research methods as: positivism, post-positivism, critical theory, and constructivism. However, in IT/IS, Myers (1997); Orlikowski and Baroudi (1991); and Trauth (2001) identified only three classifications of the underlying assumptions, namely: (i) the positivist perspective; (ii) the interpretive/constructionist perspective; and (iii) the critical theory perspective.

(i) The Positivist Perspective

The positivist perspective has been defined by Myers (1997, p. 3) to

> ... generally assume that reality is objectively given and can be described by measurable properties which are independent of the observer (researcher) and his or her instruments. Positivist studies generally attempt to test theory, in an attempt to increase the predictive understanding of phenomena.

Trauth (2001) indicated that the positivist perspective has been the underlying philosophical assumption dominating the qualitative research studies such as Lee's (1989, 1991) and Moore and Benbasat's (1991) in IT/IS field. Guba and Lincoln (1994) indicated that in the positivist assumption, the researcher believes that the relationship between cause and effect exists in the nature of reality and hence his/her role would be to discover how things work in this world. Orlikowski and Baroudi (1991) indicated that the classification of IT/IS positivist research depends on the evidence found including: formal proposition/hypothesis; quantifiable variables; examination of proposition/hypothesis; and drawing of inferences about a phenomenon based on a sample.

Indeed, in the positivist belief, the researcher has minimum personal judgment in the description and analysis of the evidence. Therefore, the researcher has minimum influence on the research study and hence bias could be eliminated. However, many authors (Myers, 1997; Trauth, 2001) in the IT/IS field indicated that this type of paradigm actually exerts pressure on the researcher to be as perfect and tidy as possible rather than to focus on understanding the complexity of the world. Therefore, this study will take a constructivism perspective.

(ii) The Interpretative/Constructivist Perspective

Walsham (1995, p. 376) defined the researcher who works from a constructivist perspective as an interpretive researcher who adopt the position that

> ... our knowledge of reality is a social construction by human actors. In this view, value-free data cannot be obtained, since the enquirer uses his or her preconceptions in order to guide the process of enquiry, and furthermore the researcher interests with the human subjects of the enquiry, changing the perceptions of both parties. Interpretivism contrasts with positivism, where it is assumed that the objective data collected by the researcher can be used to test prior hypotheses or theories.

This means that the interpretative researcher can understand the world through shared meanings gathered from the communication between two people or more.

This type of paradigm has recently gained wider acceptance among the IT/IS research community (Trauth, 2001). Trauth (2001) indicated that the aim of the researcher here is to gain deeper knowledge about the structure of the phenomena within cultural and contextual situations (cited from Chua, 1986). Crotty (1998, p. 42) also indicated in this perspective "Meaning is not discovered but constructed". This has implications for the development of a theory to understand complex behaviour such as Internet technology adoption in the banking industry. The author made a distinction between the two perspectives (positivist vs constructivist) by saying that the positivist researcher imposes meaning from outside on the object whereas the constructivist researcher draws meaning from the object. These distinctions were also made by Leedy (1993), who associated the positivist paradigm with the quantitative view because it emphasises the scientific view of the world (ie., a focus on object) whereas the interpretative/constructionist paradigm was associated with the qualitative view because the emphasis is on a social view of the world (ie., subjective).

However, the role of positivism and interpretivism in IT/IS qualitative research was questioned (Silverman, 1998). Silverman questioned the role of positivism and interpretivism and advanced two reasons. First, positivist researchers' studies of objective variables give more account to rules rather than to people and second, "... decontextualized accounts of 'meanings' are very limited guides to the complexity of human-computer interaction" (p. 19).

Another interesting notion has emerged in the work of Kelin and Myers (1999) who propose some interesting thoughts about the interpretative/constructionist schools to IT/IS field research. In their study they indicated the importance of conducting interpretative field study in the IT/IS field. The authors argued that

> Interpretive research can help IS researchers to understand human thought and action in social and organisational contexts; it has the potential to produce deep insights into information systems phenomena including the management of information systems and information systems development (p. 67).

The classification of interpretative IT/IS research depends on whether or not meanings about the phenomena were acquired through the process of social construction (e.g., interactive language, shared meanings, documents) (Klein and Myers, 1999). Klein and Myers argued that a set of principles for conducting and evaluating interpretative field studies in information systems are different from those from the positivist field studies. In an attempt to bridge the gap between the two research positions (positivist and interpretivist) they proposed a middle position.

> While we agree that interpretive research does not subscribe to the idea that a predefined set of criteria can be applied in a mechanistic way, it does not follow that there are no standards at all by which the interpretive research can be judged (p. 68).

This researcher agrees with this middle position because at least some thoughts or plan can be formulated in the mind on how to carry out the investigation rather than have no thoughts or plan at all. In addition, the researcher found no studies investigating Internet technology adoption in the Omani banking industry compared with the Australian banking industry and therefore the middle position serves the purpose of the study under investigation.

In an attempt to bridge the gap between the two research philosophies by taking a middle position, seven principles suggested by the literature have been used to guide researchers on conducting interpretive field study in the IT/IS. These seven principles are: the fundamental principle of the hermeneutic circle; the principle of conceptualisation; the principle of interaction between the researcher and the subject; the principle of abstraction and generalisation; the principle of dialogical reasoning; the principle of multiple interpretations; and the principle of suspicion. These seven suggested principles are discussed in detail below.

The Fundamental Principle of the Hermeneutic Circle

Klein and Myers (1999) defined the hermeneutic circle as "... we come to understand a complex whole from preconception about the meanings of its parts and their interrelationships." (p. 71). The hermeneutic interpretation is the process of

understanding a text within the whole context (Boland, 1991). For example, the sentence, which talks about the convenience of offering banking services, should be understood within the context of Internet technology adoption in the banking industry. This means that the whole sentence in the conversation represents part of the whole context and hence this conversation should be understood within the broader context. The emphasised point here is about meanings rather than measurements. Therefore, the details of the parts need to be understood within the whole context of phenomena under investigation.

However, the question raised here is how the researcher could link the meanings in the conversation within the broader context of the investigation. To explore meanings within a broader context would require a skilful researcher. For example, participants might talk about their perceptions about Internet technology adoption in the banking industry context, and the researcher's task would be to discover if these perceptions were favourable and maybe later on in the analysis categorise them as enabling factors. However, if he or she discovered the opposite (ie., not favourable) then these perceptions could be categorised as inhibiting factors. In the hermeneutic process, the researcher gains deeper understanding of the phenomenon as well as improved self-awareness and self-knowledge (Patton, 2003). The use of hermeneutic interpretation study was also supported by many IT/IS studies (Lee, 1994; Klein and Myers, 1999; Whitley, 1999).

The Principle of Conceptualization

Klein and Myers (1999) acknowledge the difference between the interpreter's (e.g., researcher's) understanding of the text or story told by the authors (e.g., interviewees) due to the historical differences between them. They suggested

> ... the contextualisation principle requires that the subject matter be set in its social and historical context so that the intended audience can see how the current situation under investigation emerged (p. 73).

They argued that unlike positivists, interpretative researchers assume that observable patterns within an organisation change continuously and hence the researcher must

take account of the history. Therefore, the need to understand the context in hand is an advantage to the researcher because he/she can address issues with confidence and hence understand meanings better through deep discussions.

The Principle of Interaction Between the Researcher and the Subject

> In social research, the data are not just sitting there waiting to be gathered, like rocks on the seashore. Rather, interpretivism suggests that the facts are produced as part and parcel of the social interaction of the researchers with the participants (Klein and Myers, 1999, p.74).

This suggests that the degree of telling a good story will depend on how well the researcher interacts with his/her interviewees. The authors suggest taking account of confronting interviewees with opposing issues to gain broader knowledge. For example, taking into account issues related to Internet technology adoption vs none. Internet technology adoption would indeed broaden the discussion and hence develop broader knowledge of the context. Therefore, understanding the context through interaction would depend on how well the researcher was prepared to confront his/her interviewees to understand the context.

The Principle of Abstraction and Generalisation

Abstraction and generalisation for the purpose of conclusion are important to the study (Klein and Myers, 1999). The authors took a stance on this issue by indicating that

> Whereas it is true that interpretive research values the documentation of unique circumstances and is highly suspicious of any claim that human affairs are governed by natural laws that are culturally independent, this is not the whole story. One outcome of the extensive debates in philosophy is that there is a philosophical basis for abstraction and generalisation in interpretive field studies (p. 75).

Walsham (1995) argued that generalisation for the purpose of logical reasoning is important to support validity of claims. However, he mentioned that this was different from a statistical generalisation. In this study, the researcher will seek logical reasoning by identifying perceptions of a majority of participants who favour (or do not favour) Internet technology adoption. The favourable perceptions will be classified as enabling factors and not favouring perceptions will be classified as inhibiting factors.

The Principle of Dialogical Reasoning

> This principle requires the researcher to confront his or her preconceptions (prejudices) that guided the original research design (i.e., the original lenses) with the data that emerged through the research process (Klein and Myers, 1999, p. 76).

Indeed, this principle has implications for the development of a model. For example, by comparing researchers' expectations with evidence collected from the interviewees, the researcher could make judgments on whether or not to include a certain concept in the model or to abandon it all together. Klein and Myers (1999) suggested that this process could be applied several times to improve understanding.

The Principles of Multiple Interpretations

The sixth principle is the principle of multiple interpretations. Klein and Myers (1999) defined this principle as

> The principle of multiple interpretations requires the researcher to examine the influences that the social context has upon the actions under study by seeking out and documenting multiple viewpoints along with the reasons for them (p. 77).

This suggests that the researchers should not rely on one interpretation but rather seek a competing interpretation (or alternative interpretation) to understand the phenomena under investigation. The authors suggested using probing techniques to uncover the surface in this process.

The Principle of Suspicion

Klein and Myers (1999) argued that

> Even though the above principles already encourage various forms of critical thinking, on the whole they are more concerned with the interpretation of meanings than with the discovery of "false preconceptions (p.77).

The idea here is to focus on identifying false claims in conversations. The authors suggested raising questions that are tricky, such as more or less, true or false, likely or not likely to happen, etc... Indeed, these tricky questions would help the researcher uncover what was behind the scene.

In sum, these seven principles of Klein and Myers (1999) provided guidance to the study and hence provided insights into how to conduct an interpretative (middle) position field study. Therefore, this study will take Klein and Myers' (1999) suggestions into account.

(iii) The Critical Theory Perspective

The perspective of a critical theory research is defined by Klein and Myers (1999, 69) as "Critical theorists assume that people can consciously act to change their social and economic conditions."

Ngwenyama and Lee (1997) acknowledged that peoples' ability to improve their status in society is bounded by many factors including: economic, social, cultural and the political environment that exists within the society. This position of understanding change within a society is more associated with action research studies, where the researchers study change within the social and cultural context. The focus of the researchers in this position is to identify contradicting and opposing views that exist in the same society. However, this study attempts to focus on understanding human behaviour within a society rather than on understanding change that exists within a society.

4.2.3 The Degree of Uncertainty Surrounding the Phenomenon

A third important factor identified by Trauth (2001) is the degree of uncertainty surrounding the phenomenon. The author indicated "... the less that is known about a phenomenon the more difficult it is to measure it" (p. 7). This means that the research choice could be determined by the provision of information or previous studies on the area under investigation. Another example could be lack of accessibility or the difficulty of conducting a certain method of data collection in an organisation. In relation to this study, lack of previous studies examining the adoption of Internet technology in the Omani banking industry context was a major obstacle in understanding the phenomenon under investigation. Moreover, the findings of many researchers in IT/IS who examined the applicability of TRA, TPB, TAM and diffusion theory in various practical settings utilising mostly quantitative methods (as detailed in Chapter 2 and 3), indicated that understanding IT/IS behaviour is more complex than supposed.

4.2.4 The Researchers' Skills

The fourth important factor was identified by Trauth (2001), who indicated that "an individual's level of skill, knowledge and experience in using qualitative research methods is a significant influence when deciding whether or not to employ them in IS research" (p. 8). The author suggests that the more confident a researcher is about using a certain research tool technique, the more likely he/she would be to favour one research methodology over another. In order to gain confidence in qualitative analysis, this researcher attended the NVIVO course. *This course involved training in the coding of the raw data and in its manipulation.*

4.2.5 Academic Politics

In the fifth factor, Trauth (2001) highlighted that academic politics have the potential to affect the choice of the research methodology in the IT/IS field. The author indicated that the degree of influence depends on "... the norms and values of the IS field, the institution at which one works and the status that one holds there, and the country in which that institution is located" (p. 10). To some extent social, cultural and political values could have significant influence on the findings of a thesis if the research is funded by an organisation where change in this organisation relies heavily on the findings of the thesis. However, the banking industry of Australia and Oman have no direct influence (social, cultural or political) on the findings of this thesis.

4.3 Guidelines for Gathering Evidence From the Field

An interview can be defined as

> ... a conversation that has a structure and purpose. It goes beyond the spontaneous exchange of views as in everyday conversation, and becomes a careful questioning and listening approach with the purpose of obtaining thoroughly tested knowledge (Kvale, 1996, p. 6).

This means that conversation has the potential to affect the development of knowledge and a theory that could later guide practice if well conducted.

Three types of interviews could be identified as the preferred method for collecting evidence from the field, namely: (1) structured; (2) semi-structured; and (3) unstructured (Smith, 1995; Mariam, 2002). In an attempt to gain better knowledge about the phenomena under investigation the researcher may collect evidence utilising either semi-structured or unstructured methods (Smith, 1995). These two methods allow the researcher to extract meanings that can be interpreted. On the other hand Perry (2001) indicated that the structured interview method is very limited to yes/no answers. Indeed, these interview methods provide understanding of

the phenomena under investigation, which can be utilised to identify themes later in the analysis and hence draw conclusions from emerging patterns at the end. The author argued that although the researchers' interest is to understand reality, the story told by participants might have some (or have no) relationship with their beliefs. This means that there is a possibility that respondents may not portray a true picture of the reality. That means participants' statements might be biased.

Smith (1995, p. 10) summed up this position by stating that

> It is assumed that what a respondent says in the interview has some ongoing significance for him or her and that there is some, though not a transparent, relationship between what the person says and beliefs or psychological constructs that he or she can be said to hold.

Indeed, from this position it can be argued that the extent of participants portraying the reality would depend on how well they perceived this reality. In support of this view Kvale (1995) argued that knowledge obtained from the interviews (ie., conversations between the subjects) is considered to be subjective in nature because it represents the reality of the social world (perceptions and behaviour). For example, a bank manager may tell favourable stories about the relative advantages gained from Internet technology adoption if he/she believes that Internet technology adoption could enable their bank to compete in the banking industry. However, the greatest challenge is in the arrangement of interviews with participants.

The following sub-sections are organised as follows:

4.3.1 Sampling strategy

4.3.2 Types of interviews

3.3.3 Wording of questions

4.3.4 Recording of statements

4.3.1 Sampling Strategy

The decision involving sampling strategies depends on how the researcher wishes to analyse the evidence (Patton, 2003). This means that sampling is related to what the researcher wishes to analyse and hence to find at the end of the research. Rich information could be obtained from those participants who are knowledgeable about the area we are trying to explore (Patton, 2003). Crabtree and Miller (1992) suggested targeting participants who

> ... possess special knowledge, status, and communication skills, who are willing to share their knowledge and skills with the researcher and who have access to perspective or observations denied the researcher (p. 75).

This type of sampling is called purposeful sampling (Patton, 2003) because it is used to accomplish the aim of the study. Moreover, Miles and Huberman (1994) indicated that qualitative sampling has a purpose because samples in a qualitative study are small and therefore concepts and a theory are progressively socially constructed. They further elaborated "Samples like this, both within and across cases, puts flesh on the bones of general constructs and their relationships." (p. 27). In this study, knowledgeable participants (e.g., responsible bank managers) who could contribute significantly to an understanding of Internet technology adoption in the banking industry would be invited to participate. In support of this notion, Creswell (1998) also highlighted the importance of "... selecting and studying a homogeneous sample of individuals" (p. 118) in purposeful sampling.

Miles and Huberman (1994) identified sixteen strategies for purposeful sampling. Table 4.1 shows these strategies of purposeful sampling.

Table 4.1: Strategies of purposeful sampling

Types of sampling	Purpose
Maximum variation	Documents diverse variations and identifies important common patterns
Homogeneous	Focuses, reduces, simplifies, facilitates group interviewing
Critical case	Permits logical generalization and maximum application of information to other cases
Theory base	Finding examples of a theoretical construct and thereby elaborate and examine it
Confirming and disconfirming cases	Elaborating initial analysis, seeking exceptions, looking for variation
Snowball or chain	Identifies cases of interest from people who know people who know what cases are information-rich
Extreme or deviant cases	Learning from highly unusual manifestations of the phenomenon of interest
Typical case	Highlights what is normal or average
Intensity	Information-rich cases that manifest the phenomenon intensity, but not extremely
Politically important cases	Attracts desired attention or avoids attracting undesired attention
Random purposeful	Adds credibility to sample when potential purposeful sample is too large
Stratified purposeful	Illustrates subgroups and facilitates comparison
Criterion	All cases that meet some criterion; useful for quality assurance
Opportunistic	Following new leads; taking advantage of the unexpected

Table 4.1 continued: Strategies of purposeful sampling

Combination or mixed	Triangulation, flexibility; meets multiple interests and needs
Convenience	Saves time, money, and effort, but at the expense of information and credibility

Source: Miles and Huberman (1994, p. 28)

For a phenomenological study, criterion sampling is suitable because it "... works well when all individuals studied represent people who have experienced the phenomenon (Creswell (1998, p. 118). This suggestion has been taken into account in this study because this study aims to answer the research question identified in Chapters 1 and 3. Therefore, the focus would be on understanding Internet technology adoption from the perspective of knowledgeable and responsible managers from the banking industry who could contribute significantly to this study.

However, the sampling methods in qualitative research are confusing due to different terminologies and different procedures used (Goulding, 2002). It seems that there is nothing clear-cut in qualitative research.

Therefore, this study will utilise the purposeful sampling method as guided by many authors (Miles and Huberman, 1994; Patton, 2003; Crewel, 1998) to target participants in the banking industry of Australia and Oman. This method is outlined as follows:

(1) Four major retail banks operating nationally that are listed on the Australian Stock Exchange (ASX) will be selected in this study;

(2) Five major banks operating nationally that are listed in the Muscat Security Market (MSM) will be visited (See Table 4.2); and

Table 4.2: Major National Retail Banks Listed in the MSM and ASX

	Banks listed in (MSM)	Location (Head Office)	Banks listed on (ASX)	Location (Head Office)
1	Oman International Bank	Muscat	ANZ Bank	Melbourne, Victoria
2	National Bank of Oman	Muscat	Commonwealth Bank	Sydney, NSW
3	Bank Muscat	Muscat	National Australia Bank	Melbourne, Victoria
4	Oman Arab Bank	Muscat	Westpac Bank	Sydney, NSW
5	Bank of Dhofar	Muscat		
Total	*5 Banks*		*4 Banks*	

(3) General bank details can be obtained from both ASX and MSM.[13]

The sampling included the Omani banking industry (which did not adopt Internet technology) and the Australian banking industry, which adopted Internet technology. The Australian banking industry sample was used as a typical model for comparative analysis, because it was expected that the Australian banking industry was more developed and hence would serve as a role model for other developing countries such as Oman to follow.

Therefore, a manager at each of the three different levels: strategic, tactical and operational in these banks (Australian and Omani) was invited to participate for the in-depth semi-structured interview (See letter of invitation in appendix 1). Managers were considered to be the appropriate source for this study because: (1) managers are closely involved in decisions relating to the adoption of banking technology and are likely to be involved with decisions leading to the adoption of Internet technology in the banking industry; (2) managers are likely to use advanced technologies due to their managerial role and type of information required to fulfil

[13] A preliminary investigation indicated that these banks were willing to participate in this study

their role; and (3) managers are well educated and are likely to understand and answer questions precisely.

Assuming full response from the 9 banks identified (See Table 4.3), 27 managers were interviewed over a period of 6-12 months, with each interview expected to take 45-60 minutes. Table 4.3 shows number of participants included in the sample.

Table 4.3: Classification of participants' responses according to country, banks, and level of management

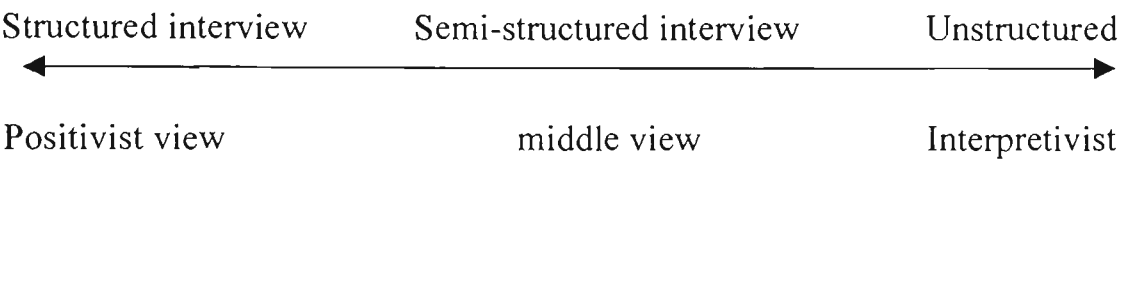
Country code	No. of banks	Strategic	Tactical	Operational	Total No. of participants
A	4	4	4	4	12
O	5	5	5	5	15
Total	9	9	9	9	27

A- represents Australian participants' responses and O- represents Oman participants' responses.

4.3.2 Types of Interviews

As mentioned earlier, the three types of interviews, mostly utilised for gathering field evidence are known as: structured interviews, semi-structured interviews, and unstructured interviews. Figure 4.2 shows how these types of interviews are applied in the field.

Figure 4.2 Representation of the degree of utilisation of the types of interviews



Source: Developed from the authors (Smith, 1995; Kvale, 1996; Merriam, 2002)

Interviewing can also be in the form of a one-to-one or focus group (Fontana and Frey, 1998). In focus group interviewing, the researcher is expected to have some communication skills in interacting with the group and following up leads. On the other hand, in a one-to-one interview, the conversation is between a researcher and a participant.

Structured Interviews

The structured interview has been defined by Smith (1995) as

> Generally the investigator decides in advance exactly what constitutes the required data and constructs the questions in such a way as to elicit answers corresponding to, and easily contained within, predetermined categories which can then be numerically analysed. In order to enhance reliability, the interviewer should stick very closely to the interview schedule and behave with as little variation as possible between interviews (p. 11).

This type of interview method is more associated with the positivist research position, where the researcher predetermines interview questions (e.g., with yes/no answers) so that they are read to all participants in the same form and in the same order to obtain consistent responses across all participants. In other situations, the researcher may produce a list of answers to specific questions for participants to select or ask respondents to fill in the answers to particular questions (Smith, 1995).

In an attempt to gather evidence of participants' beliefs, opinions and attitudes towards a certain object such as Internet technology, Merriam (2002) summed up the above points as, the researcher prepares a list of predefined specific questions to ask each participant in the structured interviews. This suggests that the less freedom the participants have in expressing their beliefs, opinions and attitudes toward Internet technology the more structured the interview is.

The benefits of utilising this type of interview method are: (1) control; (2) reliability and (3) speed (Smith, 1995). Smith indicated that pre-defined variables would ensure control, consistency across all participants would ensure reliability, and structure would ensure speed of carrying out the interview. On the other hand Smith also identified the disadvantages of conducting a structured interview as:

(1) It blocks some theoretical avenues and hence may produce weak models.

(2) It limits respondents' answers and hence the researcher may not be able to uncover important hidden issues.

(3) Pre-defined topics may not be able to solve complex phenomena such as Internet technology adoption.

(4) It is not possible to raise unforeseen questions in the interview because in the structured interview, the researcher must only asks questions exactly in the same format and sequence in order to obtain consistent responses across all participants.

However, it is possible to argue that unless the researcher has broader knowledge (e.g., previous studies) of the phenomena under investigation it would not be

possible to predetermine the structured questions that could explore precisely the reality of the world.

Semi-structured Interviews

In the semi-structured interview, the researcher prepares broad interview questions/topic to be discussed with each participant (Merriam, 2002). In the interview discussion Merriam indicated that participants can respond to any topic. This means that participants have some freedom of expressing about their views/opinion and can share their experiences with the research without too much control.

Semi-structured interviews are applicable when the phenomena are, to some extent, complex to understand or the researcher has an interest in understanding the social world of the respondent (Smith, 1995). For example, the semi-structured interview is suitable when the researcher has very little knowledge (e.g., lack of previous studies) of the phenomena under investigation or when the researcher expects changes to be continuous.

Smith (1995) recommended that the researcher produce some sort of interview schedule prior to conducting an interview. He argued that the schedule would involve the researcher in thinking through the interview in terms of having in mind the sort of questions to ask participants and in what direction the discussion may lead. However, producing such a schedule might require some sort of information from the field (e.g., previous studies). Moreover,

> ... this sort of work is often interactive rather than linear, and you may find your ideas of what the interview should cover changing or developing as you work on the schedule. (Smith, 1995, p. 13)

It was decided that before the interviews for this study took place, a manager at each of the three different levels: strategic, tactical and operational in the Omani and Australian banking industry would be invited (See sample of invitation letter in

Appendix - A) to participate for the in-depth semi-structured interview. However, many authors (Miles and Huberman, 1994; Patton, 2003; Creswell, 1998) indicated the difficulty of arranging interviews due to the difficulty in accessing location sites, records, and people.

Following Smith's guidelines, this study will employ the semi-structured interview.

Unstructured Interviews

In the unstructured interview,

> No predefined set of questions would be appropriate under many emergent field circumstances where the fieldworker doesn't know beforehand what is going to happen, who will be present, or what will be important to ask during an event, incident, or experience (Patton, 2003, p. 342).

Therefore, the researcher need not prepare any questions or know participants beforehand. In this situation, the conversation is abstract and the researcher may be required to follow up issues through probing, as well as go back to the field to further clarify issues in doubt. This approach is best used in the absence of previous information (e.g., previous studies) or when the phenomenon is complex to understand (Smith (1995). Moreover, to conduct such an interview requires unique skills and a lot of time.

Since the researcher has some knowledge (e.g., some studies were found in the Australian banking industry) to design and utilise the semi-structured schedule, it was decided to utilise the semi-structured interview method.

4.3.3 Wording of questions

The purpose of interviewing is "...to allow us to enter into the other person's perspective... with the assumption that the perspective of others is meaningful, knowable, and able to be made explicit." (Patton, 2003, p.341). This means that the reliability of the evidence will depend largely on the interviewer's ability to understand what the interviewee wanted to tell. For example, Robin and Robin (1995) argued that the quality of evidence depends on how hard the interviewer listens and interacts with the interviewee. Patton (2003, p. 342) suggested the following interviewing guidelines, for example:

(1) In the unstructured interview, the interview "... relies entirely on the spontaneous generation of questions in the natural flow of an interaction, often as part of ongoing participant observation fieldwork."

(2) In the semi-structured interview, the approach

> ... involves outlining a set of issues that are to be explored with each respondent before interviewing begins. The guide serves as a basic checklist during the interview to make sure that all relevant topics are covered.

Table 4.1 shows a sample of a prepared semi-structured interview schedule containing a set of issues for the purpose of this study.

(3) In the structured interview, standardise interview "... consists of a set of questions carefully worded and arranged with the intention of taking each respondent through the same sequence and asking each respondent the same questions with essentially the same words."

Patton (2003) also indicated that the interview questions would change as the interview progresses depending on the type of interview. For example, in the unstructured interview the questions would be reformulated many times across participants whereas in the structured the situation is the opposite. Moreover, the

author suggested utilising probes (e.g., follow-up questions) in order to improve the richness and depth of responses. However, he argued that the flexibility of probing in the interview would depend on the nature of the interview being conducted (ie., unstructured, semi-structured, and structured). For example, the more unstructured the interview the more flexibility the researcher has to probe. In other situations where the researcher is not clear about an issue, Patton, (2003) suggested rephrasing the question in a different way to encourage participants to elaborate further on the issue in doubt. On the other hand, Kavle (1996) and Robin and Robin (1995) argued that interviewing is an art. Therefore, there is no one best way to ask the questions. Table 4.4 shows a sample of a semi-structured interview schedule, which would be used during the interview.

Table 4.4: Sample of a semi-structured interview schedule

Broad topic/questions identified from the literature:	**List of probing issues identified from the literature**
Whether or not Internet technology enables banks to gain relative advantage in the industry	Convenience of service
	Innovation of ideas
	Management of services
Whether or not Internet technology improves organisational performance	Profitability
	Market environment
	Employee productivity

Table 4.4 continued: Sample of a semi-structured interview schedule

Broad topic/questions identified from the literature:	**List of probing issues identified from the literature**
Whether or not Internet technology improves customer-organisational relationship	Customers' trust
	Customers' commitment
	Customers' satisfaction
Whether or not Internet technology is easy to use	Easy to navigate
	Easy to learn
	Easy to manage

The researcher will utilise the semi-structured interview schedule as a guide to generate questions across all participants. The semi-structured interview schedule will contain broad topics including: (1) relative advantage, (2) organisational performance, (3) customer/organisational relationship, and (4) ease of use. The schedule will also include a list of issues to probing.

Before the interviews took place, the researcher conducted a pilot study with just two participants from Australia and three participants from Oman. Most of these participants had some knowledge about Internet technology and had some experience in the banking industry. The purpose of conducting the pilot study was: (1) to improve interviewing skills; and (2) to have some idea of the sort of questions to ask when in the field. Klein and Myers (1999) also support the notion of having some contextual knowledge about the phenomena and skills for conducting the interview. As the interviews progressed, other issues were expected to emerge.

4.3.4 Recording of statements

Statements made by participants are very important sources of evidence. To accomplish the objectives of this study, the researcher will record such statements to make use of them in the analysis. To record participants' perspectives, Patton (2003) suggested utilising a tape-recorder. During the interview, the reasons (e.g., to not rely on note taking and possibly miss words said) for using the tape recorder would be explained to participants and they would be allowed to stop recording at any time they wished.

The quality of the tape-recorder would have to be good so that transcribing would be possible. Indeed, this is the best method of recording statements because the researcher would increase the accuracy of collecting evidence (e.g., not miss words said in the conversation or event). In situations where the use of tape-recorder is not possible, the researcher can take notes.

> The use of the tape recorder does not eliminate the need for taking notes, but does allow you to concentrate on taking strategic and focused notes, rather than attempting verbatim notes (Patton, 2003, p. 383).

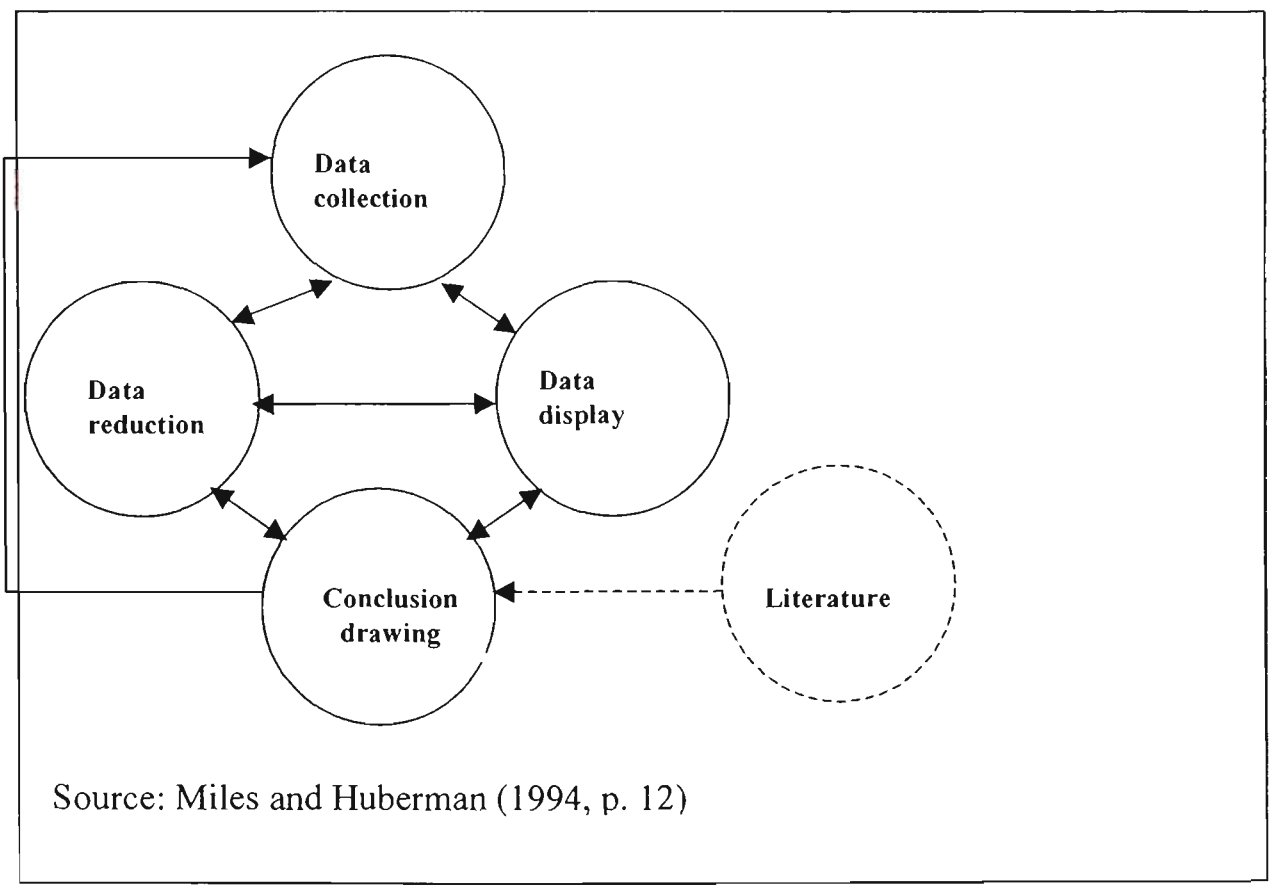
Note taking can help the researcher in many ways. For example, it can assist in formulating new questions; motivate the researcher to think about certain issues; make analysis easier; serve as a back up for the interview (Patton, 2003). It is difficult to write every sentence said or to quote a participant precisely as well as maintain consistent communication with participants. However, the greatest challenge recognised is that in the note taking the researcher is more focused on taking notes than listening and communication with participants.

As the interviewing progresses, it is expected that the schedule might change as new information emerges from the field. However, Patton (2002) suggested acknowledging the emergence of new information because it might offer interesting insight into the investigation.

4.4 Guidelines for Analysing Field Evidence and Drawing Conclusion

This investigation adopts the position between positivist and interpretivist approaches suggested by Klein and Myers (1999) in the IT/IS field. Therefore, the researcher will seek to obtain rich information that could help in answering the research question. Miles and Huberman (1994) argued for a systematic analysis to increase the quality and reliability of qualitative research. In their study they identified four main components of qualitative data analysis, namely: (1) data collection; (2) data reduction; (3) data display; and (4) conclusions drawing. The framework for analysing field evidence and conclusion drawing is shown in Figure 4.3.

Figure 4.3: A framework for analysing field evidence and conclusion drawing



Source: Miles and Huberman (1994, p. 12)

4.4.1 Data Reduction (Summarising)

The process of data reduction has been defined as "... selecting, focusing, simplifying, abstracting, and transforming the data that appear in writing-up field notes or transcriptions (Miles and Huberman, 1994, p. 10). In this process, the researcher will be involved in organising the evidence in a way that facilitates understanding and exploration of the phenomenon under investigation (e.g., Internet technology adoption). A progress analysis was also produced by Carney (1990, cited from Miles and Huberman) involving three levels of analysis: Summarising the data, identifying themes and patterns in the data, and developing a theory. Figure 4.4 shows progress analysis introduced by Carney (1990).

Figure 4.4: Progress analysis

Source: Miles and Huberman, 1994, p. 92

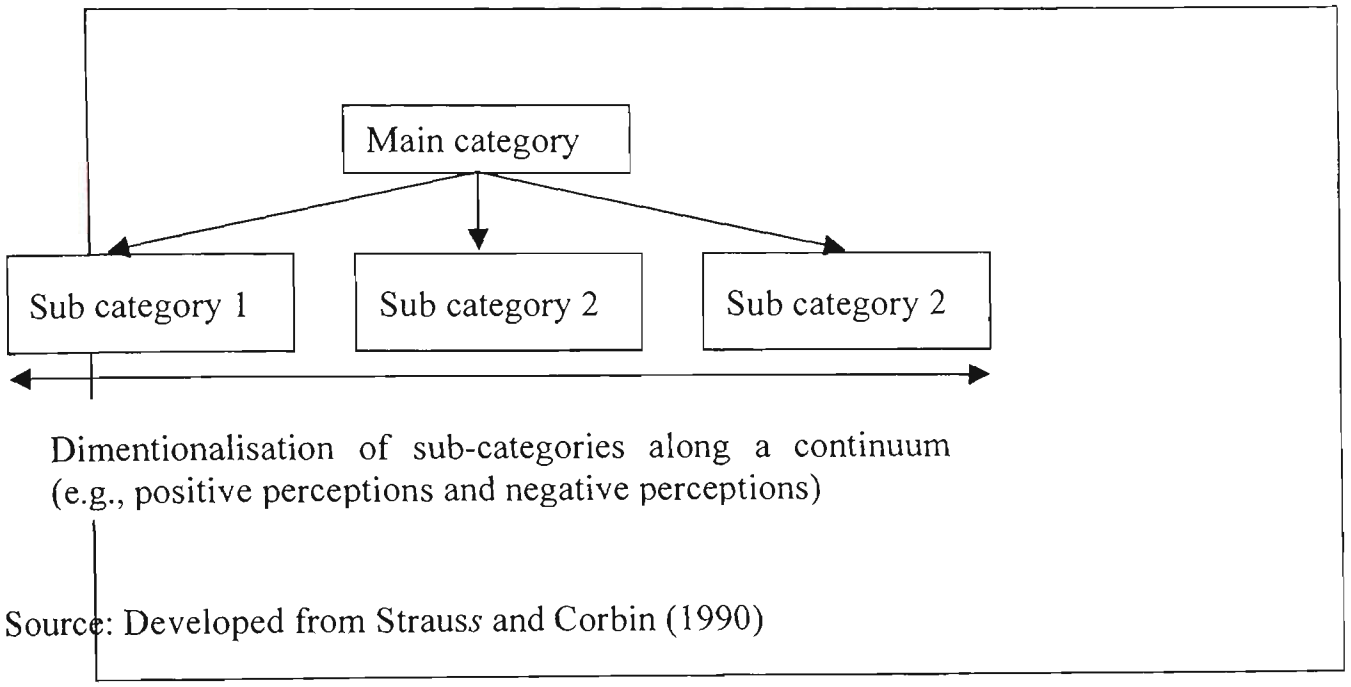
The logic behind Carney's progress analysis is that evidence gathered from the semi-structured interviews is that the researcher begins the analysis by breaking down the data into segments (or parts) and reorganising them in a way that concepts and theories can be established later on in the study. In grounded theory, Creswell (1998, p.150) suggested that in the open coding, "the researcher examines the text (e.g., transcripts, field notes, documents) for salient categories of information supported by the text". In grounded theory this process is known as open coding which is

> ... the analytic process by which concepts are identified and developed in terms of their properties and dimensions. The basic analytic procedures by which this is accomplished are: the asking of questions about data ; and the making of comparisons for similarities and differences between each incident, event, and other instances of phenomena. Similar events and incidents are labelled and grouped to form categories (Strauss and Corbin (1990, p. 74).

Indeed, this process is very tyring and time consuming because it requires "looking at each line, allocating codes to words or groups of words" (Trauth, 2001, p. 110) in a way that the researcher can ultimately form a theory from them.

In this process, Strauss and Corbin (1990) suggested considering generating categories (main categories) and their properties (or sub-categories). The properties of a category are "the characteristics or attributes of a category...", which represent sub-categories. Hence, these properties or sub-categories could be dimensionalized "along a continuum." (Strauss and Corbin, p.69). Figure 4.5 shows the framework for coding of categories.

Figure 4.5: A framework for coding of categories



Source: Developed from Strauss and Corbin (1990)

For example, the dimension of each sub-category along a continuum can be identified as positive if participants represent their views positively or negative if they represent them negatively.

This concept of category and sub-categories is also known in the qualitative software (NVIVO) as parent and children. For example, managers' perceptions of relative advantage would be categorised in the NVIVO as parent and, after careful examination of the evidence, sub-categories would be represented as children. Memos are also important in analysis because "They enable the analyst to keep an ongoing record of the analytic process." (Strauss and Corbin, 1990, p. 223).

Indeed, the complexity of data reduction lies in the amount and source of evidence collected. For example, unlike the evidence collected through the structured interview, the evidence collected from unstructured interviews is more fragmented (e.g., not systematic). To some extent the researcher expects complexity in data reduction because the transcribed document from the semi-structured interview (e.g., unlike the transcribed document from the structured interview) may have some

system. Hence, the more unstructured the interview the more fragmented the data and the more complex it is to analyse.

Therefore, it is expected that the process of reducing data in the NVIVO[14] will be to some extent complex. Many authors (Weitzman, 2000; Tesch, 1990; Richards, 2002) suggested utilising computers to assist in the analysis of the evidence and conclusion drawing. Specifically, NVIVO can assist in "... searching, marking up, linking, and reorganizing the data, and representing and storing your own reflections, ideas, and theorizing" (Weitzman, 2000, p. 806). Although the software may allow the researcher to quickly organise the evidence in a way that is accessible for quick retrieval, many authors (Miles and Huberman, 1994; Weitzman, 2000) doubted the ability of this qualitative software to do theory building.

For the purpose of this study, a qualitative computer software (NVIVO-version 2) will be utilised so that quick organisation and retrieval of the field evidence can be easily accomplished. Therefore, this study will utilise NVIVO as a qualitative computer software for the purpose mentioned above.

4.4.2 Data Display (Identifying Themes and Patterns)

The second phase of the analysis is data display. Data display is "... an organised, compressed assembly of information that permits conclusion drawing and action." (Miles and Huberman, 1994, p. 11). This means that data are presented in a visual format so that the researcher can make sense of things from them. In this process, the researcher is more focused on searching for a relationship between data to establish valid meanings. In grounded theory, this process is known as axial coding. It is the process of

[14] Most qualitative software (e.g., NVIVO) "... allow the researcher to specify relationships among codes and use these relationships in analysis, and to write memos and link them to text and codes" .... "allow the researcher to create links between different points in the text (hypertext)" and "allow the use of audio and video in place of, or in addition to, text. And there are a variety of approaches to linking categorical and quantitative data (e.g., demographics, test scores, quantitative ratings) to text and for exporting categorical and quantitative data (e.g., word frequencies or coding summaries) to quantitative analysis programs for statistical analysis." (Weizman, 2000, p.804).

> ... relating subcategories to a category. It is a complex process of inductive and deductive thinking involving several steps. These are accomplished, as with open coding, by making comparisons and asking questions. However, in axial coding the use of these procedures is more focused, and geared toward discovering and relating categories in terms of the paradigm model (Strauss and Corbin, 1990, p.114).

The process involves examining the relationship between categories that could guide the researcher in finding the emphases. Strauss and Corbin (1990) elaborated further on this process by suggesting that researchers would need to examine the data for conditions. The NVIVO software can assist in this process through the use of the boolean search tool to examine data for conditions (e.g. 'and', 'or') and display visually the emerging emphases and decide what action to take.

In NVIVO the researcher can compare different participants or different groups' views (e.g., different banking industries or different management levels within a banking industry) on a number of issues to observe any major patterns (or emphases) and maybe to draw valid conclusions about them. Miles and Huberman suggested that researchers explore/understand a relationship with a single case first, then within group sets "... to know something about the relevance or applicability of our findings to other similar settings" (p. 173). Indeed, this could improve the generalisability of the findings by identifying common concerns (e.g., enabling and inhibiting factors). In accomplishing this phase, Miles and Huberman (1994) suggested the use of a matrix to display useful information that could assist in exploring major patterns.

Therefore, the benefits of the data display in matrix are that the researcher could see major patterns within a group and hence draw valid conclusions that could answer the research question. The displayed matrix of evidence usually contains the following:

(1) Reduced text, which could be used as quotations or phrases. However, the complete textual documents in rtf format are stored in the NVIVO for further reference. The benefits of reduced text are that the researcher could

scan quickly to identify all patterns that exist within all documents (or groups).

(2) The display could also show participants' responses in group sets on a number of issues. In exploring a cross case, Miles and Huberman (1994) indicated that displays could identify major patterns that could be generalised.

In applying these suggested techniques in this study, several matrix-displays were produced from the NVIVO.

Firstly, a case-by-case matrix display was produced from the NVIVO, to compare participants' perceptions on various issues. The objective was to identify and group similar or different patterns emerging from the participants' responses by examining each case. Table 4.5 shows a case-by-case matrix display.

Table 4.5: A case-by-case matrix display- Relative advantage

Participants	Convenience of services	Innovation of ideas	Management of services
M1	I believe that a Bank which offers Internet service, is convenient to customers because it offers services 24 hours		
M2			
...			
M27			

Secondly, a thematic conceptual matrix display was produced to compare and identify similar or different concerns (e.g., patterns) within both banking industries of Australia and Oman to facilitate understanding in order to answer the research

question related to Internet technology adoption. Table 4.6 shows a sample of the thematic conceptual matrix display.

Table 4.6: Thematic conceptual matrix display - Relative advantage

	Australian		Oman	
Probing/focused issues	Enabling Concerns	Inhibiting concerns	Enabling concerns	Inhibiting concerns
Convenience of services				
Innovation of ideas				
Management of services	Easy to follow transactions		Easy to follow transactions.	

Thirdly, a thematic conceptual matrix display was produced, to compare and identify similar or different concerns (e.g., patterns) within different levels of management (e.g., strategic, tactical and operational) to facilitate further understanding of Internet technology adoption behaviour in the Australian and Omani banking industries. To make sense of things, one must take a holistic approach by comparing the study's findings with previous studies. A Sample of the print out produced from the NVIVO used in the analysis present in Chapter 5 are shown at the Appendix-C.

However, Dey (1993) indicated

> "... the data are voluminous, we have to be selective and we can select out the data that doesn't suit. Because the data are complex, we have to rely more on imagination, insight and intuition and we can quickly leap to the wrong conclusions." (p. 222)

This means that there is no clear-cut approach in the analysis and that the research analysis is an iterative process where one trusts his/her hunches.

4.4.3 Drawing conclusion

The third phase of the analysis is the drawing of conclusions. To draw coherent conclusions utilising displayed data Miles and Huberman (1994) identified 13 tactics, namely: (1) noting patterns, themes; (2) seeing plausibility; (3) clustering; (4) making metaphors; (5) counting; (6) making contrasts/comparisons; (7) partitioning variables; (8) subsuming particulars into the general; (9) factoring; (10) noting relations between variables; (11) finding intervening variables; (12) building a logical chain of evidence; and (13) making conceptual/theoretical coherence. Although some authors (Miles and Huberman, 1994; Patton, 2003) encourage researchers to utilise more than one tactic for the purpose of drawing valid conclusions, however, Miles and Huberman (1994) suggested that making contrasts/comparisons was a suitable tactic for sharpening understanding. By doing this, the comparisons between the Australian and Omani banking industry would enable the researcher to identify what were the issues important to the Australian banking industry and not to the Omani banking industry. The differences would increase knowledge about the Internet technology adoption position in both banking industries and how to improve Internet technology adoption if these banking industries sought to improve their position in the industry.

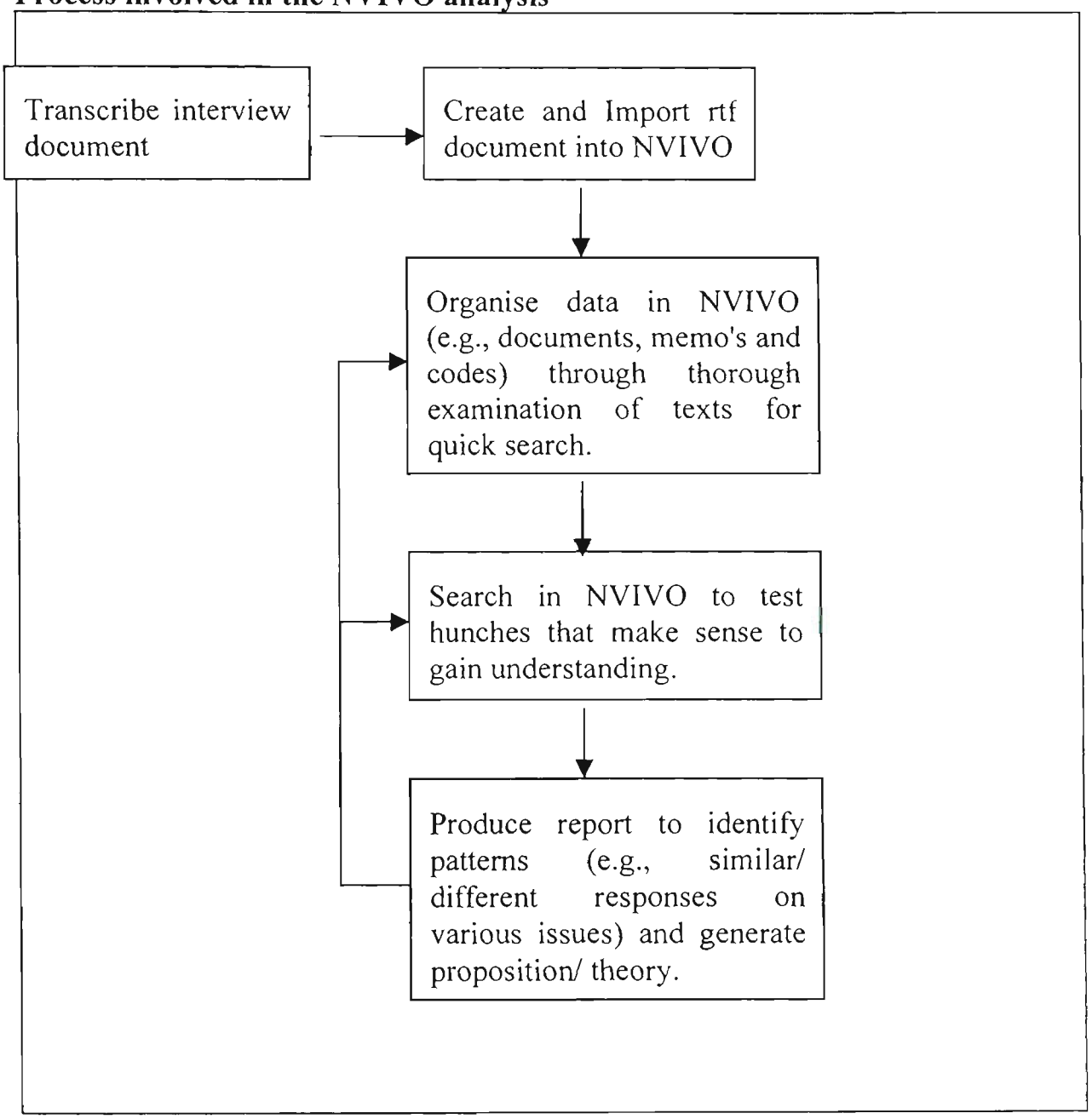
Moreover, to put all concepts into one big theory is a complicated process. Strauss and Corbin (1990) suggested using selective coding to assist in this process. They defined selective coding as

> The process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development (p. 116).

They mentioned that this process assists the researcher to focus on the relationship at an abstract level in the analysis. Indeed, this process is useful while drawing conclusions because one could observe flawed links with core categories. Moreover,

selective coding assists the researcher to develop a story that could ultimately establish a theory. In the NVIVO, the researcher is required to examine continuously the structure of the tree (e.g., a hierarchical structure of core categories and sub-categories) to ensure consistent links between the categories (or nodes - a term used in NVIVO). In summary, the process involved in the NVIVO analysis is illustrated in Figure 4.6.

Figure 4.6: Process involved in the NVIVO analysis



4.5 Guidelines For Ensuring Confidentiality and Validity

This section is organised into Sub-sections. 4.5.1 discusses confidentiality and 4.5.2 discusses validity of research findings.

4.5.1 Confidentiality

To ensure confidentiality all participants will receive a letter saying,

> You are invited to participate in this study and your cooperation is valued. To ensure accuracy of responses, it is planned subject to your consent, to audiotape the interview. The results will be used only in an aggregated form and therefore your anonymity and the confidentiality of your response are assured (See Appendix A).

A sample letter sent to participants and utilised consent form appears in Appendix - A and B.

4.5.2 Validity of Research Findings

The authors (Merriam, 2002; Maxwell, 2002) argued for the validity of research findings in qualitative research. In an attempt to address the issue of validity and reliability Guba and Lincoln (1989) identified three major traditional criteria for judging qualitative research, namely: (1) internal validity; (2) external validity; and (3) reliability. These criteria are discussed in detail below.

Internal Validity

Miles and Huberman (1994 and Merriam (2002) defined internal validity as the degree to which one's findings are close enough to the reality. This means that the closer one's findings in representing reality the more valid the research. Although this task seemed to be difficult to achieve in qualitative research (e.g. constructionist perspective) because the researcher has little or hardly any control of the research (e.g., the research is conducted unsystematically), many authors (Miles and Huberman, 1994; Denzin and Lincoln, 2000; Merriam, 2002) suggested the use of triangulation. Triangulation has been defined by Denzin and Lincoln (2000, p. 443) as "... a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation". Merriam elaborated further by identifying four types of triangulation, namely: multiple investigators, multiple theories, multiple source of evidence, and or multiple methods. This means that to ensure the validity of the findings the researcher needs to confirm by checking through other means. Merriam (2002) also identified two other strategies for ensuring validity, namely: "member checks" and "peer review" (p. 26). In the member checks, Merriam indicated that the researcher needs to "... ask the participants to comment on your interpretation of the data" (p. 26). Indeed this is a useful strategy because it allows the researcher to validate the data as well as increase data accuracy. All participants will be asked voluntarily to check for accuracy and validity of the semi-structured transcribed data to ensure validity and accuracy. The author also suggested a peer review with a member of the research community or a friend who could comment on the findings. It was decided that the final draft of this thesis would be reviewed by a colleague for the purpose of validity.

It was also decided to check the analysis of evidence in this thesis with QSR international NVIVO professionals. Moreover, my supervisors for validity and reliability have checked this thesis.

External Validity (Generalisability)

External validity (or generalisability) has been defined by Maxwell (2002, p. 52) as "... the extent to which one can extend the account of a particular situation or population to other persons, times, or settings than those directly studied". This is

about transferring knowledge from one person to another. External validity has always been the concern of positivists, however, today this concern has captured the attention of the constructionists. The role of external validity (or generalisability) has now been substantially debated in the qualitative research due to the importance of transferring knowledge from one researcher to another, so that the same investigation can be repeated elsewhere in another situation or setting (Merriam, 2002). Rosenzweig (1994) also addressed the issue of external validity in the scientific research at the international level (e.g., across countries) to address the issue of different cultures. In advancing this discussion, Merriam (2002, p. 28) argued

> If one thinks of what can be learned from an in-depth analysis of a particular situation or incident and how that knowledge can be transferred to another situation, generalisability in qualitative research becomes possible

This means that if we can learn a skill in a particular situation it is possible to tell it to others so that they can do the same elsewhere. In applying generalisability (or the process of transferring knowledge) Miles and Huberman (1994, p. 173) stressed the importance of cross-case analysis to external validity by pointing out that "We would like to know something about the relevance or applicability of our findings to other similar settings, to transcend radical particularism". The notion of cross-case analysis in the context of external validity has also been supported by Merriam (2002), who suggested that enough detail of the study must be provided so that valid comparisons could be accomplished.

In this study, the researcher will consider the issue of validity by providing enough rich description about the investigation conducted in the two banking industries of Australia and Oman.

Reliability

Reliability has been defined by Merriam (2002, p.27) as "... the extent to which research findings can be replicated". This is about how the investigation could be

repeated to achieve the same findings. For example, Miles and Huberman (1994) stressed the importance of consistency in the process across the entire study. This means that the more consistent the researcher is in his or her research, the more reliable the findings of a particular study would be. However, consistency across the responses gathered from the unstructured interview is more difficult because the researcher has very little control over their responses. To ensure consistency, Merriam (2002, p. 27) suggested using an audit trail that "describes in details how data were collected, how categories were derived, and how decisions were made throughout the inquiry". This is about keeping records of how one arrived at definition of the study's findings. In this study, the researcher will ensure all the procedures carried out in this investigation are documented in detail. See Tables (5.1 and 5.2) and Appendix C.

4.6 Site Descriptions

Utilising the research methods and design discussed in sections 4.2, 4.3, 4.4 and 4.5 this section describes the sites visited in the process of gathering evidence through a semi-structured interviews in the period between 01/02/2003 to 26/05/2003. This section provides the reader with background of the context of the two banking industries of Oman and Australia. Detailed responses obtained from these interviews and analysis of these responses is discussed in Chapter 6.

The issues discussed in this Chapter are described in the following sub-sections:

Sub-section 4.6.1 Background of the Omani Banking Industry

Sub-section 4.6.2 Background of the Australian Banking Industry

4.6.1 Background of the Omani Banking Industry

This sub-section discusses the background of the Omani banking industry including: Oman profile; Oman's economy; the banking industry in Oman; and the development of the Internet technology in Oman.

Oman profile

The Sultanate of Oman is a small country with a total area of 309.5 thousand square kilometre (kms) (United Nations report, 2003). It is one of the members of the Gulf Cooperation Council (hereafter GCC) countries (e.g., Saudi Arabia, Oman, United Arab Emirates, Qatar, Kuwait and Bahrain), which was first formed in 1981 to deal with political, economic, social and technological issues in the region. It shares borders with three countries, namely: Kingdom of Saudi Arabia; the United Arab Emirates; and Yemen.

Oman occupies a strategic location at the South Eastern corner of the Arabian Peninsula, which connects the world's three largest continents; Asia, Europe, and Africa. It has a very attractive coastline. Its coastline extends (approximately 1700 kms long) from the Strait of Hormuz in the North to the borders of the Republic of Yemen overlooking three seas; the Arabian Gulf, Gulf of Oman and the Arabian Sea (United Nations report, 2003). Oman has control over the entry to the strategic Strait of Hormuz, which is an entry point to the Arabian Gulf.

Oman is a very small nation with a total population of around 2.3 million people, with an expected population growth rate of around 2%, according to the census in 2003 (Ministry of National Economy report, 2004).

Oman's Economy

After World War II, Oman, like any other developing country, was undergoing major economic recession due to economic difficulties, which left the country in a poor economic state. Oman's economy then was "... rather primitive, backward and unpromising" (Central Bank of Oman, 2000, p. 15).

Before 1970 the economy in Oman was almost totally dependent on the traditional trade of exporting (e.g., dates, limes, and fish) and importing (e.g., limited basic foodstuffs and simple goods). Agriculture and fishery were the main sources of income for the country then. Indeed, lack of modern industries and technologies to

support the economy drove Oman's economy backwards. Although oil was found well before 1970, it was under-utilised.

However, after the accession to the throne of His Majesty Sultan Qaboos in 1970, improvements in all aspects of life were noticed. The exploration of oil in Oman brought wealth to the country and hence led Oman to depend heavily on it as a source of income. This important resource soon began to drive the economy forward and brought modernisation in all aspects of life in the country (e.g., the development of modern cities and industries). Noticeable progress was accomplished in a relatively short period of time due to the implementation of carefully studied five-year plans[15]. The implementation of a five-year plan is important because it led Oman to focus on social, economic, technological and political development.

In 2002 the total Gross Domestic Product (hereafter GDP) at current prices showed that the economy grew from Riyals Omani (hereafter RO)[16] 7,639 million in 2000 to RO 7,804 million. In spite of the fluctuation of oil prices in the international market, in 2003 the United Nations (hereafter UN) expects that Oman's economy would grow at the rate of 3% at current prices every year while maintaining inflation at a rate below 1%.

However, Al-Jahwari (2004) has argued that the GDP in the industrial sector did not perform as expected in the economy during the fifth five-year pan (e.g., 1996-2000) and hence contributed to the problem of unemployment in the country. He indicated that the major causes could be: "... lack of major industrial projects, low level of industrial financing, low level of foreign capital participation, weak structures of the domestic private sector, low importance accorded to Research and Development, [and] lack of entrepreneurial initiatives" (p. 29). This means that Oman has a long way to go before achieving an efficient and more balanced economy. The enforced policies in the Omani economy are discussed below:

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[15] The first five-year plan was adopted in 1976.

[16] US$/ AUS$ is equivalent to RO 0.286

(i) Diversification policy

Although oil is considered to be a main source of income for the country, oil prices are modest and unstable as they are dependent on international oil prices and market demand and can and do sometimes fluctuate. This leaves the country with some tough challenges to confront. This problem was recognised by the Omani government as a major challenge for the country. On the occasion of the 26th Anniversary of the National day (November 18, 1996) the Sultan of Oman gave an important speech, in which he noted:

> In addition to our determination to develop our human resources, we are working to utilise our natural wealth in enlarging and diversifying our economic base. Our LNG project comes within this field. It is one of the big steps which aims at finding diversified infinite sources for our income (Qaboos bin Said speech, reported in Central Bank of Oman, 1996, p. 9).

In the 1990s the Omani government put major emphasis on diversifying Oman's economy to overcome the risk of relying on oil as a main source of income for the country. In achieving economic diversification policy in the Omani economy four major projects were established in the non-oil sector including:

- Sohar Refinery
- the Polypropylene factory,
- the Omani Indian Fertilizer Project and
- Qalhat Liquefied Natural Gas Project

In an interview in 2004, the Omani Ministry of National Economy stated

> Non-oil sectors['] contribution in public revenue increased to about 43% in [the] 2004 budget although part of this achievement was due to the drop in oil production. This is still a starting point for a qualitative shift in the structure of the government revenues (Reported in Central Bank of Oman, 2004, p. 6).

This means that diversification is an important process in the Omani economy if Oman wishes to move toward a more balanced economy.

(ii) Privatization policy

In an attempt to accomplish sustainable development of a more efficient economy with a more balanced economy, privatization policy and mechanisms were put in place. To highlight the role of privatisation in Oman's economy the Minister of National Economy also stated

> Privatization policy has[,] since the beginning[,] been aimed towards supporting and enhancing development and economic diversification policy, reducing the government role in the commodity and service field, and promoting the private sector role by committing it to finance, implement and manage these sectors (Reported in Central Bank of Oman, 2004, p. 6)

At the beginning of the 21st Century, the transfer of ownership of some government assets to the private sector was accomplished including:

- Privatisation in the Telecommunication sector (e.g., 30% of Oman Telecommunication Company's (Omantel) share was sold to the private sector),
- Privatisation in the electricity sector (e.g desalination plant in Sohar in the process of being privatised and expected to be in full operation by 2007).
- Other projects are under-study for privatization (e.g. Mail service, Water sector, Hotels).

Indeed, the privatization policy has encouraged the private sector to play its role in the economy. Moreover, the transfer of ownership of some government assets to the private sector is expected to attract foreign investments to play a role in the economy in the form of joint ventures. However, the Minster of National Economy (2004) indicated that there was a gap between his hopes for Oman and what potential investors think.

> The Sultanate [of Oman] investment climate however is regarded as relatively one of the most attractive climates for direct investment. Many reports issued by prestigious and respected international institutions for 2003 that rate country risk facing investment and free market economy have rated the Sultanate highly among Arab countries and indeed the world (Reported in Central Bank of Oman, 2004, p. 7).

This means that Oman has a long way to go in terms of motivating foreign investments to play a role in the economy, due to the current perceived risk of investing in the Omani economy.

It is hoped that the development of the Muscat Security Market (MSM) will encourage investments (local and foreign) through the improvement of financial instruments.

Moreover, improvement in the legislation system is also hoped to ensure secure local and foreign investments as well as improve the working conditions of organisations operating in Oman. Hence it could contribute to improving profits for these organisations.

(iii) Employment

Since the development of the oil industry in Oman its labour market has relied heavily on foreign labour due to a lack of skilled Omanis. However, the Omani government has put major effort into education of its citizens in local and foreign universities. Indeed, through the effort of Omani government (e.g., by providing education, on-job training, and implementing Omanization policies). It is hoped to change the structure of the labour market in Oman (e.g., from being dependent on foreign labour to being dependent on Omani labour). Al-Jahwari (2004) noted that the Omani government addressed the concerns of the labour market (e.g., rising level of unemployment, shortages of skilled workers, lack of research centres) in the sixth five-year plan (2001-2005). The author noted further that the focus of the policies in the sixth plan were: (1) to acquire technology, marketing and training through collaboration with multinational companies; (2) to utilise industrial

capabilities through establishment of downstream industries; and (3) to support industries through establishment of research centres

The implementation of labour polices promised that jobs which were currently occupied by foreign workers would be replaced by Omanis and new jobs would be developed in the sixth year plan. Moreover, in an interview in 2004, the Omani Undersecretary of Vocational Training in the Ministry of Manpower pointed out that technical and vocational training will support the labour policies to fill the gap in the Omani labour market (Reported in Central Bank of Oman, 2004).

The Banking Industry in Oman

The banking industry is very important in the Omani economy due to its financial capability to support the development of industries and cities. It is expected to play a key role in the economic development of the country during the fifth and sixth phases of the five year plan (1995-2000 and 2000-2005 respectively).

The development of the banking industry goes back to 1948 when the British Bank of the Middle East (hereafter BBME)[17] was established to provide commercial banking services. However, with the encouragement of the Central Bank of Oman (hereafter CBO)[18] as a regulating body the banking industry continued to expand. By the 1980s the number of banks operating in Oman reached 20 and 138 branches. The expansion in the banking industry continued until the beginning of 1990s.

However, in the mid 1990s and especially with the collapse of the Bank of Credit and Commerce International (hereafter BCCI) world wide, followed by the sharp decline in oil prices, the banking industry in Oman was forced to take important measures to strengthen the banking industry and to protect the economy from collapse. Islam (2003) also mentioned that recently the GCC countries recognised

[17] Today know as HSBC bank

[18] The Central Bank of Oman (CBO) was established in November 1974 to maintain stability in the monetary system.

the importance of regulating their financial institutions to achieve their economic goals. The important measures CBO took included the minimisation of risk on capital to maintain solvency in the banking industry (Central Bank of Oman, 1997). During this period, most banks were advised to raise capital by merging, acquisition and amalgamation. Indeed, strong capital structures enabled most banks to make positive contributions on the economic front during the 1990s and the beginning of the 2000s.

At the beginning of the 2000s the reformed banking industry was of five major banks, namely:

- Bank of Dhofar (hereafter BOD);
- Oman Arab Bank (hereafter OAB);
- Oman International Bank (hereafter OIB); and
- National Bank of Oman (hereafter NBO)

The Performance of the Banking Industry

By April 2004 the statistics reported by the CBO (July/August 2004), indicated major improvements in the Omani banking operations including:

- Increase in total assets from RO 4363.5 (in millions) in April 2003 to 4622.3 RO (in Millions) in April 2004 with a 6% contribution; and
- Increase in total credit outstanding from RO 3239 (in millions) in April 2003 to RO 3299.4 (in millions) in April 2004 with a 1.86% contribution.

These significant contributions were due to the careful lending policies and restructuring of capital in the banking industry.

In summary, the Omani government recognised the problem in the economy and enforced several policies and mechanisms in an effort to diversify the country's economy and to reduce the dependence on oil as a source of income for the country.

In this respect the government has made continuous efforts in the exploration of gas and oil; in the diversification of its economy; in giving motivation to the private sector to play its role in the economy; in attracting foreign investments in the form of collaboration with multinational companies; and in the encouragement of national savings.

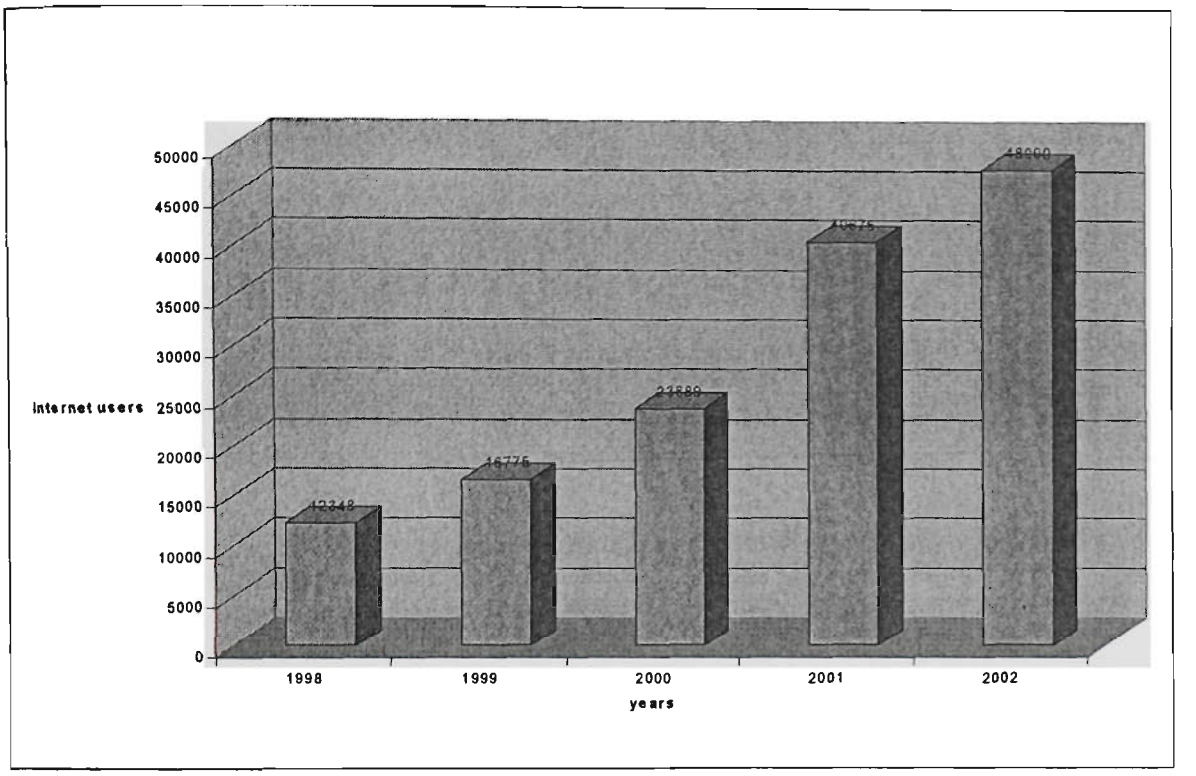
However, Oman's economy still faces other challenges, locally and internationally, namely:

- its domestic markets are small, with a lack of modern high value consumers, and most products face heavy competition from the neighbouring Gulf countries, due to higher subsidies and incentives than exist in Oman; and
- Other foreign competitors from Japan (eg., oil, gas, electronics, and automobiles), France (oil, gas, and consumer goods), the Netherlands (oil and gas) and United Arab Emirates (the re-export market).

The Development of Internet Technology in Oman

The Oman telecommunication company (hereafter Omantel) is the only telephone company that provides telephone and Internet services. Internet services were first introduced in 1997. Internet access services provided by Omantel include both dial-up and broadband which is hoped to meet the needs of individuals and corporate business. Over the years the Internet has grown only moderately in Oman's economy. Figure 4.7 shows Internet growth in Oman.

Figure 4.7: Internet users in Oman



Source: Omantel (2002, p. 39)

Although the statistics show progressive growth in Internet usage it is, however moderate.

4.6.2 Background of the Australian Banking Industry

In this sub-section the discussion of the background of the Australian banking industry is organised into three categories: Australian profile; Australian economy, the banking industry in Australia.

Australian profile

Australia is a huge country with a total surface area of about 7,741 thousand sq kms. According to Australian Bureau of Statistics (hereafter ABS) the Australian population was estimated in 2003 at 19.9 million, with an annual population growth rate of about 1.2% (www.abs.au). Although Australia is a multicultural society the official language is English.

Australia's Economy

Unlike the Omani economy, the Australian economy is more diversified and most formally government-owned organisations have been privatised. These economic policy reforms were enforced in the Australian economy after it experienced economic recession in the mid 1980s to promote a more diversified, efficient and competitive economy on a global scale. The estimated GDP grew fairly well during the late 1980s, but it declined at the beginning of 1990s due to a recession in economic activity. However, it grew again steadily at a rate of about 3% in the mid 1990s (www.abs.au). By 2002 the recorded GDP according to the ABS was Aus$697,607 (in million) with a growth rate of about 3.8% (www.abs.au). In summary, the Australian economy grew very strongly over the years due to careful economic policy reforms adopted by the Australian government and the private sector. However, the challenge remains as to how this strong economy can sustain its competitiveness in the face of a turbulent global environment.

The Banking Industry in Australia

The banking industry in Australia consists of the Reserve Bank of Australia (hereafter RBA) and 35 banking groups including the four major banks[19] (known as the 4Bs) (Gary, 1998, Kent and Debelle, 1999).

In an attempt to improve efficiency in the Australian financial sector, the banking system was deregulated in 1983 through the

> ... lifting of deposit controls, authorising of savings banks to provide cheque facilities, invitation of foreign banks to operate in Australia, changes in ownership of authorised money market dealers, expansion of services by credit unions and building societies, and so on (Avkiran, 2000, p. 123).

Deregulation of the banking system led to the creation of intense competition[20], formulation of the "4Bs", and rapid development of technology (Elliott, 1990). These changes motivated banks to develop new products and services as well as introduce cost-effective distribution channels to safeguard market share and profits. The four major Australian banks are identified as

- National Australia Bank (NAB);
- WestPac (WP);
- Commonwealth Bank (CB); and
- Australia New Zealand Bank (ANZ)

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[19] The four major banks in Australia are Commonwealth, ANZ, National Australia, and WestPac.

[20] As a result of foreign bank entry such as Bank of America, Citibank, Barclays, National Westminster, Chase Manhattan, Bank of Tokyo, Royal Bank of Canada, Hong Kong and Shanghai, and Standard Chartered.

These changes in the Australian banking industry motivated most banks to innovate and develop new services/products as well as introduce cost-effective distribution channels to safeguard their market share and profits in the industry.

By 2000 most of these 4B's are now utilising Internet technology to position their banking services online. Details of their experience on Internet technology adoption are discussed in the literature review in Chapter 2.

4.7 Summary of the Chapter

The qualitative research methods and design discussed in this chapter allowed the researcher to follow the guide and investigate Internet technology adoption successfully in the banking industries of Oman and Australia. Specifically, this chapter provided guidelines for:

- selecting research methodologies;
- gathering evidence from the field;
- analysing field evidence and drawing conclusions; and
- ensuring confidentiality and validity.

In accomplishing this study, several problems were encountered and solved. They included:

(A) Although semi-structured interviews provide guidelines for gathering data, they were not predetermined (e.g., less structured). This less structured approach allowed different perspectives to be explored in the semi-structured interview conversation. Indeed, this was a problem because of the time limit and cost involvement in the process. In solving this problem the researcher followed Patton's (2003, pp. 375-376) suggestion by:

> ... (1) knowing what you want to find out, (2) asking focused questions to get relevant answers, (3) listening attentively to assess the quality and relevance of responses, and (4) giving appropriate verbal and nonverbal feedback to the person being interviewed.

(B) The researcher faced difficulty in arranging interviews with responsible participants in the Australian banking industry. However, this problem was solved through follow-up process, which, however, inevitably caused delay to the study.

(C) In analysing the evidence gathered through a semi-structured interview, the researcher faced yet another challenge, including the overwhelming amount of text data and fragmented text which was difficult to analyse. Part of the difficulty comes in identifying the text segments (or units of meaning) in the text content and in attaching the name (or abbreviation) to this text segment. The less structure the content has, the more difficult it is to categorise the data across various responses in the analysis. However, Miles and Huberman (1994) suggested a framework for analysing data (e.g., data reduction and data display). This framework provided insights into solving this problem. Moreover, utilisation of the NVIVO software assisted in the organisation of data in a way that facilitated comparative analysis.

Chapter 5: Analysis Of Evidence And Data Presentation

5.1 Introduction:

In the previous Chapter 4, the focus was to explore the field research methodologies and design as a guide to capture themes and identify patterns that could emerge from the semi-structured interviews. In this Chapter the discussion is extended by:

(1) Presenting patterns of findings observed from the evidence gathered from the semi-structured interviews schedule guide, which contains four major topics: perceived relative advantage (RA), perceived organisational performance (P), perceived customer/organisational relationship (CR) and perceived ease of use (EOU). By comparing different participants' perceptions (e.g., enabling and inhibiting concerns) based on the banking industries and their level of management on various issues related to Internet technology adoption, observable patterns were noted.

(2) Analysing their relevance to the following research questions:

(a) What were the enablers and inhibitors of Internet technology adoption in the banking industry of Oman?

(b) What were the enablers and inhibitors of Internet technology adoption in the banking industry of Australia?

Twenty-seven semi-structured interviews were conducted in the five banks of Oman and four major banks of Australia. The field interviews conducted with the managers responsible for the decision to adopt Internet technology in the banking industry at each of three different levels of management (e.g., strategic, tactical, and operational) in each bank enriched this research with their perceptions about Internet technology adoption. All 27 semi-structured interviews with managers from three different levels in the two banking industries were recorded utilising audio-tapes and note-taking.

The entire series of 27 semi-structured interviews recorded on audio-tapes were transcribed word-by-word and documented into a Microsoft Word (Ms Word) software using a rich text file format (hereafter rtf). The rtf print outs of the transcribed Ms Word documents were checked-ut by participants for accuracy and validity. The rtf Ms Word documents of all 27 participants were imported into NVIVO 2 and analysed in the NVIVO according to the protocols suggested by Gibbs (2000). Elaborated responses from the banking industry of Oman and Australia are presented in Sub-sections 5.2.1 and 5.2.2 respectively.

Table 5.1 presents the details of the semi-structured interviews conducted in the banking industry of Oman. It reports details of interviews including: field site, management levels, participants, locations of the interview, dates of the interview, times of the interviews, duration of the interview, transcription size, issues considered, interviews checked by interviewees for validity.

Table 5.1 Details of the interviews conducted in the Omani Banking industry in the period between 14/1/2003 to 22/2/2003.

Sites	Management levels	Participants	Interview locations	Dates	Times	Duration (minute)	Transcript-ion (words)
Oman International Bank	Strategic	M1	Muscat	01/2/2003	11:40-12:22	42	3,937
	Tactical	M2	Muscat	29/1/2003	12:00-12:21	21	3,438
	Operational	M3	Ibra	22/2/2003	12:30-13:15	45	3,592
National Bank of Oman	Strategic	M4	Muscat	03/2/2003	11:05-11:35	30	3,670
	Tactical	M5	Muscat	28/1/2003	08:30-09:15	45	5,960
	Operational	M6	Muscat	02/2/2003	12:45-13:45	60	2,180
Bank Muscat	Strategic	M7	Muscat	18/1/2003	08:20-09:15	55	4,198
	Tactical	M8	Muscat	14/1/2003	10:00-11:00	60	5,215
	Operational	M9	Muscat	18/1/2003	12:15-13:00	45	3,603
Oman Arab Bank	Strategic	M10	Muscat	04/2/2003	09:00-09:45	45	3,716
	Tactical	M11	Muscat	04/2/2003	10:00-10:35	35	3,067
	Operational	M12	Muscat	08/2/2003	12:40-13:15	35	3,995
Bank of Dhofar	Strategic	M13	Muscat	27/1/200	10:20-11:15	55	5,013
	Tactical	M14	Muscat	27/1/2003	09:00-09:45	45	5,415
	Operational	M15	Ibra	06/2/2003	18:30-19:00	30	2,594

Table 5.1 shows that:

- Five major retail Banks operating nationally that are listed on the Muscat Security Market (MSM) were visited for the purpose of this field study.

- Fifteen managers from the Omani Banking industry responsible for the decision to adopt Internet technology adoption in these banks were approached through a letter inviting any manager at each of the three different levels - strategic, tactical and operational in these Banks to participate in this study. A manager at each of the three different levels of management - strategic, tactical and operational in each of these Banks accepted the invitation and were interviewed in-depth for the purpose of this study.

- The names of the participating interviewees were not mentioned in this study for the purpose of confidentiality; however, a coding scheme was used for this analysis e.g., M1, M2, etc...

- All interviews except one were conducted in the Muscat area (capital area of Oman) because in most banks the managers responsible or Internet technology adoption were located in the capital area. One interview was conducted in Ibra (regional area).

- The interview schedule in the Omani Banking industry started on 14/01/2003 and was completed on 22/02/2003.

- The duration of each interview was, on average, approximately 35 minutes.

- The size of transcription for each interview was approximately 4000 words and, on average, it took one week to transcribe each tape. So the time taken to transcribe fifteen interviews was approximately fifteen weeks. The transcription process started on 17/3/2003 and was completed on 7/7/2003.

- To ensure accuracy and validity participants checked-the transcribed documents.

Table 5.2 presents the details of the interviews conducted in the Australian banking industry. It reports details of interviews including: field site, management levels, participants, location of the interview, dates of the interview, times of the interviews, duration of the interview, transcription size, issues considered, interviews checked by interviewees for validity.

Table 5.2 Details of the interviews conducted in the Australian banking industry in the period 15/4/2003 to 22/8/2003.

Sites	Management levels	Participants	Interview locations	Dates	Times	Duration (minute)	Transcript-ion (words)
ANZ Bank	Strategic	M16	Melbourne	22/8/2003	10:10-11:00	50	4,938
	Tactical	M17	Melbourne	22/8/2003	15:20-16:15	55	4,656
	Operational	M18	Melbourne	18/8/2003	10:40-11:15	35	4,249
National Australia Bank	Strategic	M19	Melbourne	15/4/2003	16:00-16:35	35	2,972
	Tactical	M20	Melbourne	20/5/2003	15:00-15:30	30	2,971
	Operational	M21	Melbourne	28/7/2003	15:00-15:45	45	4,990
Common-wealth Bank	Strategic	M22	Sydney	28/5/2003	10:00-10:45	45	4,786
	Tactical	M23	Sydney	28/5/2003	11:00-11:40	40	3,489
	Operational	M24	Sydney	28/5/2003	12:00-12:40	40	3,890
Westpac Bank	Strategic	M25	Sydney	26/5/2003	14:00-14:45	45	5,822
	Tactical	M26	Sydney	26/5/2003	10:00-10:50	50	6,092
	Operational	M27	Sydney	26/5/2003	11:30-12:15	45	5,359

Table 5.2 shows that:

- Four major retail Banks operating nationally that are listed on the Australian Stock Exchange (hereafter ASX) were visited to achieve the objective of this field study.

- Twelve managers from the Australian banking industry responsible for the decision to adopt Internet technology adoption in these banks were approached through a letter inviting any manager at each of the three different levels of management - strategic, tactical and operational in each of these banks to participate in this study. A manager at each of the three different levels - strategic, tactical and operational - in these banks accepted the invitation and were interviewed in-depth to fulfil the aim of this study.

- The names of the participating interviewees were not mentioned in this study for the purpose of confidentiality, however, a coding scheme was used for this analysis e.g., M16, M17, etc...

- Interviews were conducted in Melbourne and Sydney because the managers responsible for Internet technology adoption in most banks were located in these two areas.

- The interview schedule in the Australian banking industry started on 15/04/2003 and was completed on 22/08/2003.

- The duration of each interview was approximately 35 minutes, on average.

- The size of transcription for each interview was approximately 4000 words, and on average, it took one week to transcribe each tape. The time taken to transcribe 12 interview tapes was approximately 12 weeks. The transcription process started on 25/08/2003 and was completed on 17/11/2003.

- Participants checked all transcribed interviews for validity and accuracy.

In an attempt to reduce data, the main topics, the major issues to be investigated issues and the emergent themes from the transcribed semi-structured interviews were coded using NVIVO software. For example, after careful examination of texts, segments were coded or categorised by attaching them to the node. In NVIVO, the node is referred to as a category and sub-category (Gibbs, 2000). In an attempt to organise the evidence in a way that facilitated a quick search, the nodes were created as main categories and sub-categories. Specifically, codes considered: (1) the research questions; (2) the semi-structured interview schedule guideline; and (3) the literature review. Also, all documents were organised into sets in order to facilitate a quick search. For example, all rtf documents related to the Omani banking industry were organised into one set and the same was done for the Australian banking industry. All strategic, tactical and operational responses were organised into three sets. In an attempt to examine evidence, NVIVO search tools were used to analyse evidence on two levels, by asking questions such as:

(1) Whether or not the Omani banking industry's participants (adopters) have different tendencies from the Australian banking industry's participants (non-adopters) to Internet technology adoption. The analysis considered participants' perceptions (e.g., positive or negative) on a number of focused issues within these two sets of groups.

(2) Whether or not the participants at three different levels (e.g., strategic, tactical and operational) have different tendencies to adopt Internet technology in the banking industry. The analysis included participants' perceptions (e.g., positive or negative) on a number of issues within these three sets of groups.

However, in making sense of the evidence, the analysis of the two banking industries was only utilised in this study. An interpretation and discussion of the implications of the field findings will be presented in Chapter 6. The results presented in this Chapter are organised thus:

Section 5.2 discusses participants' responses on relative advantage;

Section 5.3 discusses participants' responses on organisational performance;

Section 5.4 discusses participants' responses on customer/organisational relationship;

Section 5.5 discusses the summary of this Chapter.

5.2 Perceived Relative Advantage (RA)

This first construct is about how well a bank manager perceives that Internet technology would enable his/her organisation in gaining advantages in the industry. As the literature in Chapter 2 suggested, Internet technology could play a major role in enabling business organisations to gain advantages. In the literature, three major focused issues (also identified as issues to be investigated) related to the perception of relative advantages were identified, namely: (1) convenience of services; (2) innovation of ideas; and (3) management of banking services. In an attempt to explore enablers and inhibitors of Internet technology adoption, participants were asked whether or not Internet technology adoption would enable their banks to gain relative advantage in the industry. These three focused issues followed this broad question/topic to explore in depth the managers' perceptions of relative advantage. Managers' responses in the banking industry provided interesting insights into understanding the adoption of Internet technology in the banking industry. Moreover, it was possible to identify the dimensions from the responses as positive and negative.. The positive responses were categorised as enabling factors and the negative as inhibiting factors. Table 5.3 shows a framework for analysing relative advantage, its properties and their dimensions.

Table 5.3: A framework for analysing relative advantage, its properties and their dimensions.

	Perceptions of relative advantage	Positive view (enablers)	Negative view (inhibitors)
1	Convenience of services		
5	Innovation of ideas		
6	Management of services		

Table 5.3 represents the three main issues that were identified in the literature. The approach identified different managers' perceptions of relative advantages. The positive response expressed by managers related to the belief that the adoption of Internet technology would offer relative advantages for the banking industry, whereas negative response represented managers' perceptions that Internet

technology adoption would not offer relative advantage for the banking industry. The benefits and challenges expected from the adoption of Internet technology in the banking industry are as follows.

5.2.1 Convenience of services

In response to the broad question/topic related to perceived relative advantage, managers' responses were categorised as convenience of services. Participants from both banking industries raised several concerns including: convenience of available service, convenience of location and Internet security. These concerns are summarised in Table 5.4.

Table 5.4: Concerns raised on the issue of offering convenient services.

		Omani banking		Australian banking	
Probing/focused issues	**Emergent themes**	(+)	(-)	(+)	(-)
Convenience of services	Convenience of available service	66.67%		75%	
	Convenience of location	86.67%		66.67%	
	Internet security		6.67%		

(+) Represent enabling concerns (e.g. expected benefits) and (-) represent inhibiting concerns (e.g., expected challenges).

% Indicates majority of responses (e.g., above 50%) where perception is that Internet technology is important in achieving relative advantage in the banking industry.

From Table 5.4 it can be concluded that the issues of most concern to participants include:

(1) The evidence suggests Internet technology adoption can play an important role in achieving relative advantage in the industry. Most respondents from both banking industries of Oman (66.67%) and Australia (75%) expect Internet technology could enable them to offer convenient services to their customers, such as convenience of available service. As one of the managers put it:

> ... I think that's one of its advantages, obviously. One of the key challenges for us, though, is around making sure that we are up all the time in terms of no down time in service, which sometimes is incredibly hard to do, given the amount of traffic that we have through our site. So it does mean that, you know, there is definitely a perception by customers that we are up 24 hours, every single minute of the day, and in some respects that's extremely hard to meet. So the perception of the level of experience around being up is a lot greater than, say, your branch, where there is an expectation of 9 to 5.

(2) Convenience of location was also emphasised by most respondents from both banking industries of Oman (86.67%) and Australia (66.67%). For example, M1 pointed out that:

> ... Internet banking can be operated at different places, I mean, at your home, at your office, in Internet café, you can operate it abroad while travelling and you can still do your Internet banking transactions. In that sense it is convenient.

(3) It is interesting to note that none of the participants raised any major negative concerns relating to the issue of convenience of services in the banking industry. It is also interesting to note that most participants in both banking industries raised similar concerns (e.g., convenience of available services and convenience of location).

5.2.2 Innovation of ideas

In response to the broad question/topic related to perceived relative advantage, the responses related to ideas were categorised as innovation of ideas. These responses raised several concerns, including: rapid development of ideas, culture, sophistication/customisation of ideas, Internet security, and online marketing. A summary of these concerns is illustrated in Table 5.5.

Table 5.5: Concerns raised on the issue of innovation of ideas.

		Omani banking		Australian banking	
Probing/focused issues	**Emerged themes**	(+)	(-)	(+)	(-)
Innovation of ideas	Rapid development of innovative ideas	80%		58.33%	
	Culture		6.67%		
	Sophistication/customisation of service	6.67%			
	Internet security				8.33%
	Online marketing	20%		33.33%	

From Table 5.5 it can be concluded that:

(1) Most respondents (the Omani banking industry 80% and the Australian banking industry 58.33%) agreed unanimously that rapid development of innovative ideas was a concern associated with the issue of their creativity in offering banking services to their customers. Both banking industries took the view that rapid development of innovative ideas could be achieved through Internet technology adoption. As M11 states:

> While what is happening is that there are many customers who have ideas and they cannot come to the bank because they are far from the bank and they cannot come. The Internet will allow us to know the customers'

requirements, their needs for new services, their ideas and then we are going to analyse these ideas and implement them. So I think yes.

5.2.3 Management of services

From the broad question/topic related to perceived relative advantage and subsequent probing, respondents raised several concerns, including: easy to follow up requests/complaints, Internet security, awareness/knowledge about Internet technology, consistent quality service, business process re-engineering, and convenience of available service. The responses were associated with management of services. A summary of these concerns is illustrated in Table 5.6.

Table 5.6: Concerns raised on the issue of management of services.

		Omani banking		Australian banking	
Probing/focused issues	**Emerged themes**	(+)	(-)	(+)	(-)
Management of services	Easy to follow up requests/complaints	86.67%		58.33%	25%
	Internet security				8.33%
	Awareness/knowledge about technology		6.67 %		
	Consistent quality service	6.67%		16.67%	
	Business process re-engineering			8.33%	8.33%
	Convenience of available service	6.67%			

Table 5.6 shows that:

(2) Most participants (Omani banking industry 86.67% and Australian banking industry 58.33%) agreed that the ease of following up requests/complaints on the Internet was a major enabling concern associated with the issue of

managing banking services in the industry. Emphasising the role of Internet technology in following up requests and complaints to achieve better management of services in the banking industry, M10 indicated:

> ... we will be able to know better the clientele and their needs, so in that respect that will help a lot and would be beneficial for the Bank. In many cases today we don't have the full picture of our clientele base here. We are making progress every day but we are not yet in a situation where we know exactly what my clients are doing, how much or all their assets and liabilities are in their accounts, so that we can be more efficient.

(3) None of the participants raised any major inhibiting concerns relating to the issue of management of banking services.

In summary, there was agreement amongst respondents from both banking industries that Internet technology adoption has the potential to affect banks' relative advantages in the industry. In supporting this discussion most responses expressed the belief that Internet technology would enable them to offer their customers more benefits including:

(4) convenience of services (e.g., convenience of available service and convenience of location);

(5) innovation of ideas (e.g., rapid development of innovative ideas); and

(6) management of services (e.g., easy-to-follow-up requests and complaints).

Indeed, if they could offer more benefits to their customers they would be able to gain advantage in the industry.

5.3 Perceived Organisational Performance (P)

This second construct is associated with how well a bank manager perceives that Internet technology would improve his/her organisational performance in the industry. The literature suggested that the Internet is an important technology because it has the potential to affect the banks performance in the industry. In an attempt to explore enablers and inhibitors of Internet technology adoption in the banking industry participants were asked whether or not Internet technology adoption could improve their bank's performance Three issues, namely: (1) profitability; (2) market environment; and (3) employee were utilised to explore in depth Internet technology adoption in the banking industry. Table 5.7 shows a framework for analysing perceived organisational performance, its properties and their dimensions.

Table 5.7: A framework for analysing perceived organisational performance, its properties and their dimensions.

	Perceptions of organisational performance	Positive view (enablers)	Negative view (inhibitors)
1	Profitability		
5	Market environment		
6	Employee productivity		

This framework was utilised to support data analysis and presentation of results. The following are major enablers and inhibitors contributing to the adoption of Internet technology in the banking industry.

5.3.1 Profitability

Managers' responses to the broad question and focused questions related to organisational performance were labelled as profitability. Participants' responses

raise several concerns including: (1) reduction of communication cost (2) high technology investment cost and (3) the need for economise of scale for Internet use. Table 5.8 summarises participants raised concerns in the issue of banking profitability in the industry (in the Australian and the Omani banking industry).

Table 5.8: Concerns raised on the issue of profitability.

		Omani banking		Australian banking	
Probing/focused issues	**Emergent themes**	(+)	(-)	(+)	(-)
Profitability	Reduction of communication costs	13.33%		75%	
	High technology investment cost		50%		
	Need for economise of scale for Internet technology use		50%		

Table 5.8 shows that:

(7) The majority of respondents in the Australian banking industry (75%) believe that they could reduce communication costs. The Australian banking industry has taken full advantage of Internet technology to reduce communication costs. In supporting this claim M17 commented:

> I guess it could because Internet banking offers a far lower cost base for doing banking and business. As I said before, it costs us less to offer services on the Internet than it does across our branch network and other channels. So yes, in the longer term if you go back to the branches it means reduced capital or capital spending, having branches maintaining people, everything else that goes with the branch. The cost of maintaining the Internet versus maintaining X number of branches would be significantly different. When this thing takes off even further, again, the offerings that can be made across the Internet as opposed to face to face or mail out and the traditional manners of marketing and sales would obviously be cost savings to the organisation as well.

(8) The majority of respondents from the Omani banking industry indicated two impediments: high technology investment cost (50%) and the need for economies of scale for Internet technology use (50%). In elaborating the problem of high technology investment cost M10 highlighted the fact that

> This, for the reason I was saying to you, if you make, you know, a major investment and which cannot be compensated in the short term because you can't increase your passes, and it's not going to be up, so the competitive market for those who are likely to be beaten at the same time and you cannot reduce your major costs for the Bank. It is still far, and another thing, you will not be able to do, you know, to affect, aah, to reduce, aah, your manpower cost, you might do it in the long-term by not paying or by not hiring because of the cost which is the major concern for the Bank.

And in elaborating the need for economies of scale for Internet technology M8 emphasised

> I would say this is too early stage in this market for Internet banking ... the cost would not be reduced until the number of customers using the technology increases. Yes, the cost of transaction would be higher at this stage until enough number of customers increase or start using the electronic banking service and even the other benefits which are not relevant to filtering of better information to the customer, it's also coming only when the customer base increase. Adoption by customers is the key here. See any service is dependent upon the number of customers adopting the technology innovation.

In relation to profitability the Omani banking industry expects difficulties in terms of: high technology investment cost and the need for economies of scale for Internet technology use. Indeed, these two obstacles are inhibiting the rate of Internet technology adoption in the Omani banking industry.

5.3.2 Market Environment

The second issue associated with perceived organisational performance was labelled as market environment. In response to this issue managers from both banking industries of Oman and Australia raised several concerns, including: online marketing, acquisition of niche market, customer-base expansion, globalisation of banking services, convenience of location, awareness/knowledge about Internet technology, and rapid response of services to customers. A summary of these concerns is illustrated in Table 5.9.

Table 5.9: Concerns raised on the issue of market environment.

		Omani banking		Australian banking	
Probing/focused issues	**Emerged themes**	(+)	(-)	(+)	(-)
Market share growth	Online marketing	6.67%	6.67%		
	Acquisition of niche market	13.33%	6.67%		
	Customer base expansion	33.33%	20%	33%	58.33 %
	Globalisation of banking services	6.67%	6.67%		8.33%
	Convenience of location	6.67%			
	Awareness/knowledge about Internet technology		6.67%		
	Rapid response of services to customers	6.67%			

From Table 5.9 it can be seen that:

Most Australian banking industry respondents (58.33%) were concerned about the problem of expanding their market. According to one manager:

> I don't think it would, in terms of performance in the industry against other competitors, I'm not sure that the Internet is going to make a big difference in terms of market share because we're not the only ones, like every bank is doing this. They might offer different ways of, sort of, services here and there, but predominantly everyone's doing the same thing with that, so it's not going to be a big drive in the market share creation of ... Both; I mean, the people that are in the new markets and existing markets, whether it's this bank or any other bank, or any other provider, service provider, I think they're all in the same boat, we've all got Internet sites, Internet banking, etc. So that might have been different a few years ago when we were just getting into this space, you know, first in best dressed sort of thing, but now everyone's doing it. You go to the NAB, ANZ, Westpac, Commonwealth, Bendigo, Building Societies and they've all got the same offerings, pretty much (M17).

The expansion of the banking market on the Internet is problematic for the Australian banking industry due to heavy competition. The majority of Australian respondents believe that competitors on the Internet could easily copy their offerings. Indeed, this is a problem for them. On the other hand, most respondents from the Omani banking industry did not raise any major concern on this issue. A possible reason for this could be due to lack of experience of the Internet.

5.3.3 Productivity of Employees

From the broad question/topic associated with perceived organisational performance, respondents raised the major concern of improving business efficiency. Their responses were categorised under productivity. A summary of these concerns is illustrated in Table 5.10.

Table 5.10: Concerns raised on the issue of employee productivity.

		Omani banking		Australian banking	
Probing/focused issues	**Emergent themes**	(+)	(-)	(+)	(-)
Productivity of employees	Businesses efficiency	50%	6.67%	66.67%	
	Reduce banking operation cost	13.33%			
	Rapid response to customers	40%	6.67%	33.33%	
	Convenience of available service	26.67%			

From Table 5.10 seems that:

Most respondents from the banking industry of Oman (50%) and of Australia (66.67%) expected that their business efficiency could be improved on the Internet. However, none of the participants raised any major inhibiting concerns. As one of the managers put it:

> Yes, I think definitely. Going back to what I said before, if we adopt the Internet we would be able know our customers and we would be able to react quickly and we would be able to respond much more quickly too. A long time ago we used to do every thing by hand, of course this exhausted the staffs while doing their tasks. Well, I think definitely it would enhance productivity in the short-term and in the long-term of course (M10).

In summary, there was agreement in opinion amongst respondents from the Omani and Australian banking industries that Internet technology could improve organisational performance. This agreement was identified on the issue of improving employees' productivity (e.g., improving business efficiency) by responding quickly to customers' requests on the Internet. However, there was disagreement on the issue of profitability. For example, Australian respondents

expect to benefit from the reduction in communication costs whereas Omani respondents expected problems of high investment cost and economies of scale for Internet technology use. Moreover, Australian respondents expected problems in expanding their market whereas Omani respondents raised no concern on this issue.

5.4 Perceived Customer/Organisational Relationship (CR)

This third construct is about how a bank manager perceives Internet technology adoption in terms of improving their organisational relationship with their customers. In the literature, three major issues related to the perception of customer/ organisational relationship, namely: (1) customers trust, (2) customers commitment, and (3) customers satisfaction were identified.

In an attempt to explore enablers and inhibitors of Internet technology adoption, participants were asked whether or not Internet technology adoption would improve the relationship between banks and customers. Three focused issues following this broad question/topic were used to explore in depth Internet technology adoption in the banking industry. Table 5.11 shows the framework for analysing managers' perceptions about customer/organisational relationship.

Table 5.11: Framework for analysing perceived customer/organisational relationship

	Perceptions of customer/organisational relationship	Positive view (enablers)	Negative view (inhibitors)
1	Customers trust		
5	Customers commitment		
6	Customers satisfaction		

In response to the broad question/topic associated with perceived customer/organizational relationship, managers' responses were organised as: (1) customers trust; (2) customers commitment; and (3) customers satisfaction. The most enabling and inhibiting factors of Internet technology adoption in the banking industry are discussed below.

5.4.1 Customer Trust

On the issue of customers trust, participants raised several concerns, including: communication of services, Internet security, Internet/e-commerce legislation, accuracy/reliability of technology, convenience of available service and awareness/knowledge about Internet technology. These themes were organized under customers trust. Table 5.12 summarises the concerns raised by participants on the issue of customer trust in banking industries of Oman and Australia.

Table 5.12: Concerns raised on the issue of customer trust

		Omani banking		**Australian banking**	
Probing/focused issues	**Emergent themes**	(+)	(-)	(+)	(-)
Customer trust	Communication of services		13.33%		
	Internet security		86.67%		75%
	Internet/e-commerce legislation		6.67%		
	Accuracy/reliability of technology	13.33%		16.67%	
	Convenience of available service	6.67%		8.33%	
	Awareness/knowledge about Internet technology		13.33%		

Table 5.12 shows that:

Most Omani banking industry respondents (86.67%) and Australian banking industry respondents (75) were concerned about the problem of Internet security. This concern was considered to be an inhibiting factor in both banking industries. However, neither banking industries raised any major enabling concerns. One of the managers claimed:

> In terms of security, I think that's a concern that all customers have, about Internet banking and the safety of their information and their funds. I think it's always at the back of their mind. We offer a security guarantee to try and overcome that issue, but I think it's always something that's present for them. But the convenience of Internet banking probably outweighs the security fears that they do have, and they see the benefits associated with Internet banking, which is why they continue on using the service. I think it's a major issue for any Internet banking service, regardless of the institution, and that's what our research confirms. So it's an industry-wide issue. And some of that's hyped up by the media. Nothing is ever going to be 100% safe but obviously we take money very seriously, so we try and protect the bank from fraudsters and obviously we try and protect our customers from that as well. We put forward recommendations to them to try and maintain the security of their information (M24).

As the literature indicated, this problem can affect the adoption of Internet technology; hence banks' customers cannot put their full trust in Internet technology due to fraud and privacy violation problems. Both banking industries recognise the difficulty of solving this problem and believe that Internet security management is possible through continuous surveillance and maintenance of their database.

5.4.2 Customer commitment

On the issue of customer commitment, respondents raised several concerns. These concerns were identified as: customer loyalty and communication of service. A summary of these concerns is illustrated in Table 5.13.

Table 5.13 Concerns raised on the issue of customer commitment.

		Omani banking		Australian banking	
Probing/focused issues	**Emergent themes**	(+)	(-)	(+)	(-)
Customer commitment	Customer loyalty	20%	73.33%	83.33	16.67%
	Communication of service		6.67%		

From Table 5.13 it can be seen that the major concern raised by the Australian banking industry (83.33%) was that customer loyalty could be improved on the Internet whereas the Omani banking industry (73.33%) perceived the opposite. In expressing their concerns, a manager from the Australian banking industry indicated:

> The research that we have suggests that it improves our customer loyalty to our brand. It's a service that if we didn't offer, an Internet banking service to customers that you would see a high volume of our customers going to other banks that did. So it definitely helps in terms of retaining customers that require an Internet banking service, so it definitely improves customer loyalty there (M24).

Australian banking industry respondents believed that customer loyalty could be achieved on the Internet, because of the differentiated offering in the industry, while a different opinion was expressed on this issue by the Omani banking industry. As M1 expressed:

> The Internet enhances the customer's commitment to the relationship no the Internet does not actually, it does not as I said for the reason as I said that you are dealing with totally a machine and customer's loyalty is only built in your beliefs of the Bank as a whole and not necessarily through the services that are performed through the Internet. And customer loyalty comes with you being relaxed with one person or two persons or number of persons who are working for that Bank. And today you know loyalty is not as strong as it used to be previously because the offers aah people are looking at different offers given by different Banks. So, you know loyalty does not play a major role nowadays in my opinion. Just like to add to this, people are looking at what more can they get from this Bank than being a loyal that I am committed to this bank, I love the bank and what more can they give me. It's about what am I getting more here than they give to me.

Although, a majority of Australian banking respondents believed that it was possible to achieve customer loyalty on the Internet, the Omani banking industry saw customer loyalty as an obstacle on the Internet. This was because they believed that people could do better than machines. Indeed, this was an inhibiting concern for the Omani banking industry. It seems that the Omani banking industry is mostly relying on human capital to deliver their banking services. However, this is a questionable practice in the global competitive market where competition is intense and where most business organisations have no protection or support from the government.

5.4.3 Customer Satisfaction

On the issues of customer satisfaction, respondents raised several concerns, including: the need to reduce conflict and to reduce the risk of customers switching banks. These concerns were organised under the issue of customer satisfaction, as guided by the literature. A summary of these concerns is illustrated in Table 5.14.

Table 5.14 Concerns raised on the issue of customer satisfaction.

		Omani banking		Australian banking	
Probing/focused issues	**Emergent themes**	(+)	(-)	(+)	(-)
Customer satisfaction	Reduce conflict	60%	40%	50%	16.67%
	Reduce risk of switching banks	13.33%	26.67%	25%	8.33%

Table 5.14 reveals that on the issue of customer satisfaction, a majority of respondents from both banking industries of Australia (50%) and Oman (60%) were favourable to the view that Internet technology could reduce conflict between the bank and its customers. This view was elaborated by M5 who stated:

> Definitely, it will improve because what happen is that the customer sees his whole you in one screen like what are all my deposits, what are all my loans and other things. So to that extent the state of the relationship will improve this is not in technical term. For example, conflict could be reduced if the system is correct and other things are maintained. There is no question of conflict here if the customer sees his transaction immediately on performing from wherever he is done his transaction because the history is available. He can look at the transaction history to raise any new issues or even if there is no problem he can get back immediately without waiting for statement through the mail and he can check the statement and other things.

This elaborated view demonstrates that traditional distribution channels are not equipped to deal with communication conflict arising from conducting a business with customers and that modern technologies such as the Internet are required to enhance the quality of customer/bank relationship.

In summarising the above-discussed issue, the following notes were made:

The interview results on perceived customer/organisational relationship demonstrate that all respondents understand that Internet technology adoption is important for their organisation and the industry as a whole. They recognise that Internet technology adoption has the potential to affect their relationship with their customers, specifically, in areas that include:

(1) customer trust (e.g., Internet security);

(2) customer commitment (e.g., customer loyalty);

(3) customer satisfaction (e.g., ability to reduce conflict)

Respondents from both banking industries recognised that customers would be satisfied on the Internet because conflict would be reduced. They also recognised that customer trust was a challenging issue, which needed to be addressed continuously. However, their disagreement in opinion on the customer commitment issue reflects their differences in experience of the Internet.

5.5 Perceived Ease of Use

The fourth construct is related to how well a bank manager perceives that Internet technology is easy to use. The literature in Chapter 2 suggests that if Internet technology is perceived to be easy to use, then the rate of adoption will increase. The literature review also threw up three major issues related to perceived ease of use: 'easy to navigate'; 'easy to learn'; and 'easy to manage' were identified. To explore the enablers and inhibitors of Internet technology adoption in the banking industry, participants were asked whether or not Internet technology adoption was easy to use. Three focused issues for investigation followed this broad question to more deeply explore Internet technology adoption in the banking industry. Table 5.15 shows the framework utilised to analyse perceived ease of use, its properties and dimensions.

Table 5.15: Framework for analysing perceived ease of use, its properties and their dimensions.

	Perceptions of ease of use	Positive view (enablers)	Negative view (inhibitors)
1	Easy to navigate		
5	Easy to learn		
6	Easy to manage		

All responses associated with perceived ease of use were organised into three categories, namely: (1) easy to navigate, (2) easy to learn and (3) easy to manage. The following enablers and inhibitors contributing most to Internet technology adoption in the banking industry of Oman (non-adopter) and Australia (adopter) are disclosed in 5.5.1, 5.5.2, and 5.5.3.

5.5.1 Easy To Navigate

On the issue of 'easy to navigate', participants raised several concerns, including: awareness/knowledge about Internet technology, resistance towards Internet technology, user friendliness, and accessibility of service. These concerns were organised under easy to navigate. These concerns raised on the issue of easy to use are summarised in Table 5.16.

Table 5.16: Concerns raised on the issue of easy to use.

		Omani Banking		Australian Banking	
Probing/focused issues	**Emerged themes**	(+)	(-)	(+)	(-)
Easy to navigate	Awareness/Knowledge about Internet technology	6.67%	53.33%	25%	
	Resistance towards Internet technology	6.67%	13.33%	8.33%	
	User friendly	40%		91.67%	
	Accessibility of service	13.33%	66.67%	75%	8.33%

Table 5.16 presents the following:

(1) Most respondents from the Omani banking industry were concerned about lack of awareness/knowledge about Internet technology amongst customers (53.33%) and lack of access to the banking services. The difficulty of navigating on the Internet was highlighted by M3, who used the following example to demonstrate the problem of lack of awareness/knowledge about Internet technology amongst customers:

> As I said, in Oman here we still haven't started but we think that it will not be that easy for us compared to other part of the world because well ahead of us they are. It will take a little bit of time because we need to train people how to use the Internet. A little bit of training may be required. Any thing to start, especially when you have to introduce new changes. Not everybody likes changes; many people do not like changes. When people are used to something they wouldn't like to see those changes even within the life style it is not easy to change. It might take a little bit of time but I do not see problem.

Another example was demonstrated by M13 who highlighted the fact that the problem of lack of accessibility to the banking services:

> In Oman it is not that easy yet. You have to have a modem connection and you have to have lot of things to get into the Internet. It is not advanced as Europe and America. So it is not easy, but once it is easy for the people then people will use the Internet a lot and banking system should be improving on this. It is not available for you at every corner. For example in Europe if you go to a café any café you will find 2 or 3 computers connected to the Internet. You can check your e-mail and you can do some transactions. Here you have to know where it is available where the services are available and in some places the lines are not supporting the Internet very well so the people get disconnected things like that. Yet the technology has to be improved in these areas so people can be comfortable. Language may be also another difficulty.

Lack of awareness/knowledge about Internet technology amongst customers and lack of accessibility to the banking services seem to be the two obstacles that emerged from the issue of 'easy to navigate'. This means that the Omani banking industry believes that Internet technology is not easy to navigate and hence slows them down in the process of adopting Internet technology.

(2) However, major respondents from the Australian banking industry thought Internet technology was easy, e.g., user-friendly (91.67%) and was accessible to most customers (75%).

In elaborating on these lines M26 gave an example of user friendly:

> I kind of have the same answer across all of them there. As long as you can guide the customer through with ease of use and easy messages that explain what to do next then anything is easy, you know whether its just reading or doing transactions, or submitting an application form, or whatever.

An example of easy to navigate banking services (e.g., accessibility of services) on the Internet was demonstrated by M19, who mentioned:

> Yeh, well I think any one in small business and large business has and in Australia Internet is available in about 60-70% at home and there is Internet cafés and universities. Well, there is lots of cafés. I mean if you want to access the Internet you can access it, I mean even in the rural of Australia where it's less easy to access the issue is not accessibility it's more aah the speed and performance.

Australian banking industry respondents demonstrated that it is easy to navigate banking services on the Internet e.g., it is user friendly and accessible to most people. However, the Omani banking industry respondents demonstrated that it is not easy to navigate e.g., customers lack awareness/knowledge about Internet technology and lack access to banking services on the Internet. This difference in opinion is because of the difference in Internet technology experience.

5.5.2 Easy To Learn

The second issue is related to how easy it is to learn the Internet technology in the banking industry. Participants' responses raised several concerns on this issue, namely: increased automation of process; fear of learning new technology; awareness/knowledge about Internet technology; web-site design; and user friendliness. These concerns were organised under 'easy to learn'. Table 5.17 summarises participants' concerns on the issue of 'easy to learn' as regards Internet technology in the banking industry.

Table 5.17: Concerns raised on the issue of easy to learn.

		Omani Banking		Australian Banking	
Probing/Focused issues	**Emerged themes**	(+)	(-)	(+)	(-)
Easy to learn	Increased automation of process	80%	6.67%	8.33%	
	Fear of learning new technology	13.33%		16.67%	8.33%
	Knowledge about Internet technology	26.67%	33.33%	100%	
	Web site design	6.67%	6.67%		
	User friendliness	13.33%		8.33%	

Table 5.17 shows that:

Most respondents agreed that Internet technology was easy to learn. For example, the Omani banking industry respondents (80%) revealed that Internet technology was easy to learn because of the increased automation in the banking process. Another example was provided by the Australian banking industry respondents (100%), who indicated that it was easy due to the awareness/knowledge of Internet technology amongst their customers.

In demonstrating the example of increased automation in the banking process M5 highlighted the fact that

> Definitely it is easy. See doing offline transactions you would have to go through the branch whereas through in the Internet most of transactions are done automatically for you online. Actually he does not have to remember when he logs in he gets to know what are in the menus and the help. I am not in the position to say like I would perform task whether it

> is or it is madness to say that after doing the Internet banking I need to call out my customers to say how to use it.

And in demonstrating the example of awareness/knowledge of Internet technology amongst their customers M17 stated:

> I think from my perspective it is quite easy, it's very intuitive, and I don't think it's very difficult. They've got the same flavour about them, they've all got the same basis, and they all look like Microsoft Applications at the end of the day. So I think whether you're in this country or any other country, any banks Internet system, you'll find they're very common in terms of their useability and nature, and they're much the same as any other web set on the world wide web. Okay. So there's a banking site, a production site, whatever it might be, they all look the same. So I think once you've familiarised yourself with the Internet environment, or any Internet environment, the banking one is not going to be any different.

Most respondents believe that Internet technology is easy to learn e.g., most banking processes could be automated from the Omani managers' perspectives and there is an awareness/knowledge about Internet technology amongst Australian customers from the Australian managers' perspectives.

5.5. Easy to manage

The third issue is related to how easy it is to manage financial/banking transactions on the Internet. In response to this issue, respondents raised several concerns including: awareness/knowledge about Internet technology; customisation of banking services (language/terminology); online marketing; tracking of an online financial/banking transactions; flexibility of service; proper design of web site; increased automation of process; continuous update of web site; and Internet Security. Table 5.18 shows the summary of concerns raised by participants on the issue of easy to manage.

Table 5.18 Concerns raised on the issue of easy to manage.

		Omani Banking		Australian Banking	
Probing/focused issues	**Emerged themes**	(+)	(-)	(+)	(-)
Easy to manage	Awareness/Knowledge about Internet technology	6.67%	26.67%	8.33%	
	Customisation of banking services (Language/terminology)	20%	40%	91.67%	
	Online marketing	6.67%			
	Tracking of an online financial transactions	13.33%	6.67%	100%	
	Flexibility of service	20%			
	Proper design of web site	6.67%	6.67%		
	Increased automation of process	33.33%			
	Continuous update of web site		6.67%		
	Internet Security		6.67%		

Results shown in Table 5.18 demonstrate that most respondents from the Australian banking industry see that it is easy to manage financial transactions on the Internet. In demonstrating their view on this issue they emphasised:

(1) Easy customisation of banking services (91.67%) e.g., customers could customise their preferred language for processing their banking transactions. As one manager put it:

> We try and keep it simple. Well we only cater for English, oh no we do have the international site, that's one thing I didn't think of. We have the

> international site, which does provide other languages, I'm pretty sure. But yeah, the language has to be simple enough for you to understand what you're doing, and again, it's a case of if you're not sure there's the help button next to it. If you're not even sure after that there are e-mails, phones - you know numbers you can call. So we try; I mean you can't satisfy everyone, if the person is not familiar with the English language or not sure of the terms, sometimes you can't cater for everything. So I feel it's easy to understand but that they may not be the perception completely with the public (M18).

(2) And easy tracking of an online financial/banking transactions (100%) e.g., customers could track any financial/banking transactions through printed statements and downloading of financial reports about their financial position. Indeed, an online tracking of banking transactions could minimise errors because customers would be able to check receipts and payments online. On this view M18 gave an example

> With my wife, she has my credit card and I can check up exactly what she is spending it on, on the credit card because we get the statement there. So I can say why did you go to Myers and buy this dress for $40 sort of thing; but that, you know a simplistic view of it. But you can, you know again, check to see if your salary has been paid in, check your home loan - where you are with your home loan. So yes, definitely it does provide greater control and management.

Surprisingly, none of the respondents from the Omani banking industry raised any major concerns on this issue. It is possible that lack of experience of Internet technology limited their participation on this issue.

5.6 Summary of the chapter

The literature review (in Chapter 2 and 3) and the results obtained from the semi-structured interviews with 27 managers in the two banking industries of Oman (non-adopter) and Australia (adopter), provided useful insights into understanding Internet technology adoption in the banking industry. From the analysis of data, it

was possible to explore a set of key enablers and inhibitors of Internet technology adoption in the banking industry.

In this Chapter, the analysis of data was addressed within four categories, namely: (1) perceived relative advantage (hereafter RA); (2) perceived organisational performance (hereafter P); (3) perceived customer/organisational relationship (hereafter CR) and (4) perceived ease of use (hereafter EOU).

In the first category, the aim was to explore the extent to which bank managers perceived that Internet technology would enable their banks to gain relative advantage in the industry. From the results it was evident that e Internet technology adoption can play an important role in enabling banks to gain advantage in the industry. The major enablers recognised by managers in the banking industry of Oman and Australia includes: convenience of services; innovation of ideas and management of services. Table 5.19 shows the summarised major enablers of Internet technology in the Omani and Australian banking industries.

Table 5.19: Major enablers of Internet technology in the banking industry of Oman and Australia within the perceived relative advantage category.

Major enablers
Convenience of services (e.g., convenience of available service and convenience of location)
Innovation of ideas (e.g., rapid development of innovative ideas)
Management of services (e.g., easy to follow up requests/complains)

No major inhibitors were found within this category. This means that managers from both banking industries expected to achieve benefits rather than encounter challenges from the adoption of Internet technology. The Table summarises these points.

In the second category the investigation focused on the extent to which bank managers perceived that Internet technology had the potential to affect their organisational performance. The results revealed that Internet technology adoption had a bearing on organisational performance. Within this category, the Omani banking industry managers recognised the major enabler as productivity of employees and the major inhibitor as profitability. Table 5.20 shows the summarised major enablers and inhibitors of Internet technology in the Omani banking industry.

Table 5.20: Major enablers and inhibitors of Internet technology in the Omani banking industry within the 'perceived organisational performance' category.

Major enablers	*Major inhibitors*
Productivity of employees (e.g., business efficiency)	Profitability (e.g., high technology investment cost and the need for economies of scale for Internet technology use)

The Australian banking industry managers, however, identified the major enablers as profitability and productivity of employees; the major inhibitor was identified as market environment. Table 5.21 highlights the summarised major enablers and inhibitors of Internet technology in the Australian banking industry.

Table 5.21: Major enablers and inhibitors of Internet technology in the Australian banking industry within the 'perceived organisational performance' category.

Major enablers	*Major inhibitors*
Profitability (e.g., reduction of communication cost	Market environment (e.g., customer base expansion)
Productivity of employees (e.g., business efficiency)	

In the third category, the emphasis was on investigating the extent to which bank managers perceived that Internet technology could improve their customers-relationship with banks. The findings suggested that Internet technology was considered important because it could affect the relationship between banks and customers in the banking industry.

Within the 'perceived customer/organisational relationship' category, Omani managers recognised that customer satisfaction was a major enabler and customer trust and customer commitment were major inhibitors of Internet technology in the banking industry. Table 5.22 shows these a summary of the major enablers and inhibitors of Internet technology in the Omani banking industry.

Table 5.22: Major enablers and inhibitors of Internet technology in the Omani banking industry within the 'perceived customer/organisational relationship' category

Major enabling themes	***Major inhibiting themes***
Customer satisfaction (e.g., reduce conflict)	Customer trust (e.g., Internet security)
	Customer commitment (e.g., customer loyalty)

Also within the perceived customer/organisational relationship category, Australian managers identified customer commitment and customer satisfaction as major enablers and customer trust as a major inhibitor of Internet technology in the banking industry. These major enablers and inhibitors of Internet technology in the Australian banking industry are summarised in Table 5.23.

Table 5.23: Major enablers and inhibitors of Internet technology in the Omani banking industry within the 'perceived customer/organisational relationship' category

Major enablers	*Major inhibiters*
Customer commitment (e.g., customer loyalty)	Customer trust (e.g., Internet security)
Customer satisfaction (e.g., reduce conflict)	

In category four, the discussion concentrated on exploring the extent to which bank managers perceived that Internet technology was easy to use in the banking industry. The interview data revealed that perceived ease of use was a good indicator of Internet technology adoption. It showed that a more experienced and knowledgeable person would have fewer problems in adopting Internet technology in the banking industry.

Focusing on these lines, Omani managers saw that Internet technology was easy to learn as an enabling factor. However, they saw that difficulty of navigation on the Internet was an inhibiting factor. Table 5.24 shows these summarised major enablers and inhibitors of Internet technology in the Omani banking industry.

Table 5.24: Major enablers and inhibitors of Internet technology in the Omani banking industry within the 'perceived ease of use' category

Major enablers	*Major inhibitors*
Easy to learn (e.g., increased automation of process)	Easy to navigate (e.g., awareness/knowledge about Internet technology and accessibility of services)

Australian managers, on the other hand, saw that Internet technology was easy to navigate, easy to learn and easy to manage. They did not see any difficult within the 'ease of use' category. These major enabling factors are illustrated in Table 5.25.

Table 5.25: Major enablers of Internet technology in the Australian banking industry within the 'perceived ease of use' category

Major enablers
Easy to navigate (e.g., user friendly and accessibility of service)
Easy to learn (e.g., awareness/knowledge about Internet technology)
Easy to manage (e.g., customisation of banking services and An online tracking of banking/financial services)

In summary, this study explored the enablers and inhibitors of Internet technology adoption in both banking industries. The findings suggest that perceived RA, P, CR, and EOU jointly could provide better understanding of Internet technology in the banking industry than what TRA, TPB, TAM and DIT propose. Therefore, managers in both banking industries could utilise these findings as a checklist to help increase the rate of Internet technology adoption through the development of strategies that aim to minimise unfavourable perceptions.

CHAPTER SIX: CONCLUSION

6.1 Introduction

In an attempt to make a distinct contribution to the body of knowledge this chapter reviews the study and summarises the field findings reported in the preceding chapter. It commences as follows:

Section 6.2: Reviews the thesis

Section 6.3: Summarises the field findings and discussion

Section 6.4: Implications and recommendations for the Omani banking industry

Section 6.5: Implications and recommendation for future research

Section 6.6: Limitations of this investigation

Section 6.7: Summary of this Chapter

6.2 Review of the thesis

This section is organised into two sub-sections. 6.2.1 reviews the thesis purpose and 6.2.2 reviews the stages undertaken to accomplish the thesis purpose.

6.2.1 Overview of the thesis purpose

The speech delivered by HM the Sultan of Oman in June, 1995 was a call for a change in Oman's economy from a traditional to a more developed economy. The banking industry was urged to play a major role in the development of efficient and

competitive financial services that, it was hoped, would support the economic development of the country.

Since the development of the Omani banking industry in 1948 all banks have relied heavily on the traditional distribution channels for banking services. However, in 1997 the Oman telecommunication company (hereafter Omantel) introduced Internet services to home and business users. According to the statistics provided by Omantel in their annual book for 2002, Internet technology users had reached 12,348 in 1998 after one year of its first introduction. By 2002 Omantel reported that the number of Internet users had reached 48,000, making an Internet population of around 2% of general population. Indeed, the Internet technology infrastructure has grown steadily over the years but has only had a moderate effect on the Omani economy. Yet the Omani banking industry has been taking very slow and cautious initiatives to move from the traditional distribution channel banking services to electronic distribution channel banking services.

Paradoxically, the growing number of users of Internet technology in the Omani economy has not motivated the Omani banking industry to adopt Internet technology the way the Australian banking industry has done. Market Intelligence Strategy Centre (hereafter MISC) reported there were six million Internet banking users in the Australian banking industry. This demonstrates that Internet technology has been far more developed in the Australian banking industry compared with the Omani banking industry. Other analysts (Wright and Ralston 2002) expect Internet technology to grow substantially in the Australian banking industry. This means that the Omani banking industry would be far behind in this development and hence would be lagging behind the global competitive markets.

In addressing the problem of Internet technology adoption in the Omani banking industry this thesis has sought to explore what the enablers and inhibitors of Internet technology were in the Omani banking industry compared with the Australian banking industry. As stated in Chapter one, the aim was to inform the Omani banking industry with the more mature Australian experience.

Therefore, this study was accomplished in three major stages: (1) review of extant literature; (2) use of qualitative methods to carry out the investigation; and (3) analysis of field evidence. These stages are outlined below.

6.2.2 Review of stages undertaken to accomplish the thesis purpose

In accomplishing the thesis purpose stated in Chapter one, three major stages were adopted.

First stage

In the first stage (Chapter 2 and 3), an extensive review of the extant literature was made to explore the issues and theoretical framework for understanding Internet technology adoption in the banking industry. This stage was important because it provided the basis for understanding the issues and the framework underpinning Internet technology adoption in the banking industry.

In Chapter 2, the review of the extant literature discussed the issues related to Internet technology adoption. It showed that managers' perceptions of relative advantage (hereafter RA), organisational performance (hereafter p), customer/organisational relationship (hereafter CR), and ease of use (hereafter EOU) could affect the decision to adopt Internet technology in the banking industry. From the literature reviewed it was possible to identify the following issues related to perceived RA, P, CR, and EOU:

Perceived RA

In perceived RA the discussion concentrated on the extent to which a bank manager perceives that Internet technology would enable his/her organisation in gaining relative advantage in the industry. This means that if a bank is able to gain advantage in the industry it would be in a position to compete or even be superior in the industry. The issues related to perceived RA were identified as: convenience of

services; innovation of ideas, and management of services. These identified issues assisted in exploring in depth the adoption of Internet technology in the banking industry.

Perceived P

The discussion explored the extent to which a bank manager perceives that Internet technology would improve organisational performance in the industry. If an organisation such as a bank expects to improve its performance with Internet technology then the possibility of adopting it would be greater. In concentrating on perceived P the issues related to perceived P were explored as: profitability, market environment, and employees' productivity. Indeed, these explored issues provided a deeper understanding of the adoption of Internet technology in the banking industry.

Perceived CR

In perceived CR, the discussion emphasised the extent to which a bank manager perceives that Internet technology would improve his/her organisation's relationship with customers. Indeed, if an organisation perceives that Internet technology can improve its relationship with its customers then the chance of adopting the Internet will be higher. From the review of the literature it was possible to identify focused issues, namely: customer trust, customer commitment, and customer satisfaction. These focused issues enabled the researcher of this thesis to better understand the adoption of Internet technology in the banking industry.

Perceived EOU

The discussion concentrated on the extent to which a bank manager perceives that Internet technology is easy to use. This means that if a bank perceives that Internet technology is easy to use then he/she will be motivated to adopt Internet technology in his/her bank. The issues identified in 'perceived EOU' include: easy to navigate, easy to learn, and easy to manage. They provide deeper understanding of Internet technology adoption in the banking industry.

In Chapter 3, the review of the extant literature discussed the theories and models of Internet technology adoption in the banking industry and provided insights into the framework for understanding Internet technology adoption in the banking industry. These theories/models demonstrated that Internet technology adoption is determined by people's perceptions (or beliefs). These theories/models identified in the extant literature review included:

- theory of reasoned action (hereafter TRA);
- theory of planned behaviour (hereafter TPB);
- technology acceptance model (hereafter TAM);
- diffusion of innovation theory (hereafter DIT)

Studies related to Internet technology adoption were discussed extensively in these two chapters (2 and 3) and gaps in the literature were identified. These gaps include:

(1) a lack of research on Internet technology adoption in the banking industry of developing countries such as Oman.

(2) although the literature suggested two previously examined factors (e.g., perceived relative advantage and ease of use) for understanding Internet technology adoption, these did not fully explain Internet technology adoption in the banking industry. Hence, it was decided to include two additional factors not previously examined in the context of this study, namely: perceived organisational performance and perceived customer/organisational relationship. It was expected that the inclusion of these two additional factors would provide a better understanding of Internet technology adoption in the banking industry. These two factors were considered in this thesis in order to understand Internet technology in the banking industry. Therefore, this thesis addressed these four variables jointly to understand Internet technology in the banking industry.

(3) mixed and inconclusive findings were discovered in the extant literature.

(4) most studies reviewed in the extant literature utilised a quantitative methodology to accomplish their findings.

Collectively, Chapter 2 and 3 provided the basis for an understanding of Internet technology in the banking industry and a guide for this research.

In Chapter 4 the methodologies used to carry out this investigation were discussed.

Second stage

In this stage, qualitative research methodologies and procedures discussed in Chapter 4 were utilised in exploring what were the enablers and inhibitors of Internet technology adoption in the Omani and Australian banking industries. The gaps identified in Chapter 2 and 3 were addressed through the interpretive (middle position) perspective suggested by Klein and Myers (1999).

A semi-structured interview schedule was utilised to gather field evidence on the managers' perceptions (e.g., RA, P, CR, and EOU) in the banking industry. It was designed based on the issues identified from the literature, to explore in-depth what were the major enablers and inhibitors of Internet technology adoption in the two banking industries of Oman and Australia. The evidence was collected from 27 managers through a semi-structured interview schedule in these two banking industries.

Third stage

In Chapter 4, the elaborated responses from the 27 managers were analysed and the findings were reported according to the suggestion offered by various authors (Miles and Huberman, 1984; Strauss and Corbin, 1990). A qualitative software called NVIVO was utilised to assist in analysing the collected evidence. Specifically, it assisted the analysis in reducing (e.g., organise and sort) and displaying the evidence (e.g., thematic conceptual tables) in a way that made it possible to make sense of them.

Form the analysis it was possible to:

- identify the major patterns that provided in-depth understanding of Internet technology adoption.
- reduce the data through the process of generating categories from the data and establishing links between them (e.g., open and axial coding) as suggested by Strauss and Corbin (1990) in the grounded theory. In this process a code is attached to a segment of text and then links between the coded data are explored.
- display thematic conceptual tables for the purpose of comparing issues with a case and across cases.
- identify patterns that made sense and provided understanding of Internet technology adoption in the banking industry within the collected evidence.
- draw conclusions from identified patterns.

Indeed, this understanding was expected to contribute significantly to solving the problems that actually exist in the Omani banking industry, that is, the Omani banking industry is slow in adopting Internet technology. Moreover, it was expected to contribute towards informing the Omani and Australian banking industry managers about experiences associated with the adoption of Internet technology .

More specifically, it was expected that this research would contribute to the literature in four ways.

(1) The findings will contribute specifically to informing the Omani banking industry's managers about the more mature Australian experience. The Omani banking industry managers will be aware of the problems and recommendations for them to take action if they should seek to improve their competitive position in the industry and perhaps in the global market.

(2) From the existing literature, four perceptions related to Internet technology adoption were identified and examined jointly in the banking industries of Australia and Oman. The findings of this study will contribute significantly to the IT/IS adoption literature.

(3) Extant literature showed the findings of most studies' were mixed and inconclusive; this study addresses this gap.

(4) This study relied on the analysis of rich qualitative text data to interpret the findings about Internet technology adoption in the Omani Banking industry (non-adopter) compared with the Australian banking industry (adopter) to expand our understanding of Internet technology adoption in the banking industry.

6.3 Summary of the major findings and discussion

As stated in Chapter 1, the aim of this thesis was to establish what were the enablers and inhibitors of Internet technology adoption in the Omani banking industry (adopter) compared with those in the Australian banking industry (non-adopter). It is hoped that the findings of this thesis will inform Omani banking managers by revealing to them the experience of the more mature Australian banking industry.

In achieving this stated aim, four perceptions, namely: perceived relative advantage (hereafter RA); perceived organisational performance (hereafter P); perceived customer/organisational relationship (hereafter CR); and perceived ease of use (hereafter EOU), that could have a bearing on Internet technology adoption were jointly investigated in the two banking industries (Omani and Australian). To account for these perceptions, two perceptions of Information Technology adoption suggested by Moore and Benbasat (1991) were considered in this thesis. These were (1) RA and (2) EOU. Rogers (1995) originally identified these two perceptions of

technology adoption as RA and complexity. Moore and Benbasat (1991) and Taylor and Todd (1995a) explained that these two constructs are similar to the fundamental construct of TAM introduced by Davis (1986). They highlighted the fact that RA is similar to the perceived usefulness construct and perceived complexity is similar to the perceived ease of use construct, due to the similarity in their definitions and in the operation of their measurements. However, the inclusion of two perceptions, namely: P and CR, not previously considered were identified in the IT/IS literature to broaden our understanding of Internet technology adoption in the banking industry.

In achieving the aim of this thesis, qualitative methodologies were used to address the gaps identified in the literature review (chapter 2 and 3). In this investigation managers' perceptions about Internet technology were jointly considered as follows.

(1) The two perceptions adopted from Moore and Benbasat (1991) seemed to be appropriate in this thesis because it is much easier for respondents to recognise these two terms and they are similar in concept to the TAM's fundamental constructs. In addition, these two perception constructs were supported in many studies (Davis, et al., 1989; Moore and Benbasat, 1991; Taylor and Todd, 1995a).

(2) Two new constructs were also introduced, namely: P and CR. These two new constructs were included in this thesis to account for managers' perceptions that could comprehensively provide broader understanding of Internet technology adoption in the banking industry.

Therefore, these four perceptions were jointly investigated in order to solve an existing problem in the Omani banking industry as well as to provide insights into Internet technology adoption for other developed countries such as Australia.

The findings revealed that all four perceptions jointly provided a deep understanding of what were the enablers and inhibitors of Internet technology adoption in the banking industry. Most managers in both banking industries contributed significantly with their interesting beliefs and experiences and provided excellent

understanding to this thesis of the benefits and challenges of Internet technology adoption in both banking industries.

The findings of this study were consistent with the findings of Moore and Benbasat (1991) and Davis et al. (1989) and the supporting literature on TAM and diffusion, especially in RA and EOU. Moreover, the findings of this study (e.g., RA, P, CR, and EOU) could be utilised to solve existing problem in the Omani banking industry.

In this study two new important constructs not previously considered, namely: P and CR were included. These new constructs could be extensions to the earlier models. While there is clear evidence of the potential importance of these two new variables, the limited data restrict the extent to which the finding can be generalised. Thus, further empirical analysis is necessary to confirm the conclusion.

From an analysis of elaborated responses collected from 27 managers through semi-structured interviews in the banking industries of Oman (non-adopter) and Australia (adopter) and presented in Chapter 5, it was found that, the managers from both banking industries had different perspectives, especially when the analysis was carried out on P, CR and EOU. Rogers (1995) explained that adopters could have more positive perceptions than non-adopters. The findings confirmed that the Australian banking managers perceived less inhibitors of Internet technology than Omani banking managers. This means that the Australian banking industry has less challenges to confront than the Omani banking industry. Moreover, it was observed that Australian banking managers were more orientated towards using computers in their banks compared with the Omani banking managers.

The analysis of evidence also explored the managers' perceptions about adopting Internet technology at three different levels of management (e.g., strategic tactical and operational) within the Omani and Australian banking industries. However, due to the mixed results, it was not possible to make sense of the analysed evidence. Hence, this part of the analysis was excluded from this study. This could have implications for future research – it would be interesting to find out if these different levels could make meanings for Internet technology adoption within other banking industries or other industries in general.

Jointly, the four perceptions (RA,P, CR, and EOU) provided useful insights into the findings of this study. The following sub-sections report the summary and the discussion of these field findings, respectively.

6.3.1 Perceived Relative Advantages (RA)

In the interview, participants were asked whether or not they perceived advantages from Internet technology adoption. Three issues for deep investigation were identified from the literature in Chapter 2, and were used to focus attention on the RA. These issues included: convenience of services, innovation of ideas, and management of services. To a very large extent the extant literature addressed these issues.

The overall responses indicated that these issues for investigation were appropriate because it was possible to identify emerging themes (e.g.,, enabling/inhibiting concerns) and to explore different patterns in these responses from those in the banking industries of Oman (non-adopters) and of Australia (adopters). Table 6.1 contains a summary of the field findings of the RA from the analysis in Chapter 5.

Table 6.1 Major enablers of Internet technology adoption within perceived relative advantage category in both banking industries of Oman and Australia.

Major enablers
Convenience of services (e.g., convenience of available service and convenience of location)
Innovation of ideas (e.g., rapid development of innovative ideas)
Management of services (e.g., easy to follow up requests/complains)

These field findings are discussed under the heading Omani/Australian banking industry.

Omani /Australian Banking Industry

The Omani and Australian banking industries were found to perceive that Internet technology was important in the industry and that it could enable the banking industry to gain relative advantage. This means that the Omani banking managers recognised the importance of Internet technology in achieving relative advantage. The enablers of Internet technology adoption found in both the Omani and Australian banking industry include:

- Convenience of services (e.g., convenience of available service and convenience of location);
- Innovation of ideas (e.g., rapid development of innovative ideas); and
- Management of services (e.g., easy-to-follow-up requests/complains)

The field findings also showed that both the Omani and Australian banking industries perceived no major challenges were likely to be encountered along the way to the adoption of Internet technology.

The field findings revealed that both banking industries of Oman and Australia expected no problems in achieving RA. Thus, it is reasonable to conclude that both the Omani (e.g., early adopter) and Australian (e.g., mature adopter) banking industries expect to gain relative advantage from the adoption of Internet technology.

These expected benefits seem to have some effect on planning to adopt Internet technology. Moreover, most managers revealed that they tended towards adoption of Internet technology. In fact, it has recently been reported that two major banks have already started implementing the use of Internet technology in their banks. It would be interesting to find out, after full adoption, what have been their experiences.

In summary, it was found that both banking industries agree that Internet technology could enable their banks to gain advantages such as convenience of services, innovation of ideas, and management of services. Indeed, the adoption of Internet technology would enable the banks in Oman and Australia to position their products in the industry. The influence of perceived relative advantage on IT/IS adoption have attracted major attention in the extant literature reviewed in Chapter 2 (Rogers, 1995; Davis et al., 1989; Moore and Benbasat, 1991). These authors argued that the rate of IT/IS adoption could be affected, based on people's perception about expected RA. The findings of this study are consistent with the findings of other studies (Tan and Teo, 2000; King and Teo, 1996; Wisner and Corney, 2001). However, the question is whether banks would be able to sustain their relative advantage in their industry using the Internet.

6.3.2 Perceived Organisational Performance (P)

In Chapter 2 it was argued from a theoretical perspective that it is possible to increase the rate of Internet technology adoption if a person perceives that organisational performance could be improved (e.g., King and Teo, 1996; Dedrick et al., 2003). Indeed, the literature emphasises the importance of adopting the Internet in order to improve organisational performance. In this study it was possible to investigate managers' perception of organisational performance and the tendency to adopt Internet technology in the banking industry.

In this investigation, participants were asked whether or not Internet technology adoption had the potential to improve organisational performance. In the extant literature in Chapter 2, three major issues were identified in the organisational performance category: profitability, market environment, and employee productivity. Table 6.2 contains the field findings summary of the perceived organisational performance from the analysis in Chapter 5.

Table 6.2 Major enablers and inhibitors of Internet technology adoption within perceived organisational performance category in both banking industries.

	Oman banking		Australian banking	
Focused issues	**Enablers**	**Inhibitors**	**Enablers**	**Inhibitors**
Profitability		High technology investment cost	Reduction of communication cost	
		Need for economies of scale for Internet technology use		
Market environment				Expansion of customer base
Productivity	Business efficiency		Business efficiency	

The summarised field findings are discussed under two headings: (i) Omani banking industry and (ii) Australian banking industry.

Omani Banking Industry

In the Omani banking industry, the majority of managers' responses indicated that the rate of Internet technology adoption could be affected by their perceptions about organisational performance. Indeed, their responses suggest that managers' perceptions about organisational performance are important in the process of Internet technology adoption in the banking industry. Specifically, it was found that perceived improvement in productivity of employees (e.g., improvement in business efficiency) could increase the rate of adoption. On the other hand, perceived problems in profitability (e.g., high technology investment cost and the need for economies of scale for Internet technology use) could inhibit the banking industry from adopting Internet technology. Table 6.3 summarises the major enablers and inhibitors of Internet technology adoption in the Omani banking industry.

Table 6.3: Major enablers and inhibitors of Internet technology adoption within the perceived organisational performance category in the Omani banking industry.

Major enablers	*Major inhibitors*
Productivity of employees (e.g., business efficiency)	Profitability (e.g., high technology investment cost and the need for economise of scale for Internet technology use)

Although the findings suggest that the Omani banking industry perceives improvement in the productivity of their employees, they also show that the industry expects problems ahead in terms of achieving acceptable profit. There is no doubt that survivability and sustainability of a bank depends on its expected performance in the industry. Indeed, this is a major challenge for the Omani banking industry, because, unless they rethink their strategy to change, they will not be able to compete in the global markets.

Australian Banking Industry

The majority of respondents in the Australian banking industry demonstrated that perceived organisational performance is associated with Internet technology adoption. This means that perceived organisational performance is important, especially when making a decision to adopt Internet technology in the banking industry. In Table 6.4 the major enablers and inhibitors of Internet technology adoption in the Australian banking industry are summarised as follows.

Table 6.4: Major enablers and inhibitors of Internet technology adoption within the perceived organisational performance category in the Australian banking industry.

Major enablers	*Major inhibitors*
Profitability (e.g., reduction of communication cost	Market environment (e.g., customer base expansion)
Productivity of employees (e.g., business efficiency)	

In this investigation it was found that managers' perceptions about the expected improvement in the bank's profitability (e.g., reduction in communication cost) and productivity of employees (e.g., business efficiency) are associated with Internet technology adoption. This means that the greater the perception (e.g., having enabling perceptions) about organisational performance the more likely it is that managers will adopt Internet technology. The extant literature also revealed that the organisational performance of most banks that adopt Internet technology increased, compared with the banks that did not adopt Internet technology.

However, Australian managers expect to face a problem ahead in the market environment, in terms of having difficulty in expanding their customer base in the industry. Indeed, the possibility of expanding their customer base would be a great challenge to them in the future. The reason for raising such a problem was that the Australian banking industry is now facing intensive competition (Sathye, 1999; Ramsey, 1999). Moreover, most major banks are already adopting Internet technology as a strategic tool to expand their market and offer the same services online, which makes it harder for others to differentiate their offerings. So the real challenge here is how banks will be able to expand their market on the Internet.

In summary, the extant literature (Shin, 1997; Singh, 2004; Bresenahan et al., 2002) emphasised the importance of perceived organisational performance in the process of Internet technology adoption. The literature indicated, from a theoretical perspective, that Internet technology adoption is strongly associated with perceived

organisational performance. The findings of this study are consistent with this notion. Specifically, the findings of this study suggest:

- Both managers from Oman and Australia expect to improve productivity of their employees (e.g., improving business efficiency) on the Internet.
- In regard to profitability, disagreement in opinion was found. The disagreement in opinion revealed that whereas the Australian banking industry perceived that the Internet technology adoption could improve communication costs,. the Omani banking industry was more concerned about the high cost of investment and the need for economies of scale associated with Internet technology adoption. One possible explanation for this is that the Omani banking industry is very small compared with the Australian banking industry. Consequently, these banks have no incentive to invest in a technology that requires high investment on a very small market. This means that acquiring and maintaining Internet technology would be very expensive due to a lower customer base and that is why the Omani banking industry perceives that investments can be risky in this type of market environment. Moreover, it seems that the Omani banking industry expects no financial or technical support from the government.
- In regard to market environment, it was found that the Australian banking industry was concerned about how to sustain its customer base rather than expanding. Most managers in the Australian banking industry believed that their industry had reached a level of maturity in terms of Internet technology adoption. That is, most banks now utilise Internet technology and hence it is hard to expand market. Therefore, the challenge for them would be on how to maintain (or sustain) their market by focusing on creating values for their customers on the Internet. In the case of the Omani banking industry, however, managers did not raise any concern on the issue of market environment. A possible reason for this is that the industry is still in its infancy and has a long way to go in terms of Internet technology adoption. In the early introduction of the Internet banking services they expect no problems in terms of expanding their customer base. However, it would be interesting to find out later on what their perceptions are after they have fully adopted Internet technology (e.g., reach maturity stage) in their banking industry.

6.3.3 Perceived Customer/Organisational Relationship (CR)

The role of perceived customer/organisational relationship (hereafter CR) in IT/IS adoption has attracted considerable attention in the literature. In the t literature reviewed in Chapter 2 it was argued, from a theoretical stance, that CR is associated with Internet technology (e.g., Sathye, 1999; Athanassopoulos, 2000; Anderson and Srinivasan, 2003). This means that CR has the potential to affect Internet technology adoption in the banking industry.

In this investigation it was possible to explore managers' perception of CR and the tendency to adopt Internet technology in the banking industry. Participants were asked whether or not they perceived that Internet technology adoption could improve the relationship with their customer. Three focused issues identified in the literature in Chapter 2 were utilised to probe this broad question, namely: customer trust; customer commitment; and customer satisfaction. Table 6.5 shows the field findings summary of the perceived customer/organisational relationship from the analysis in Chapter 5.

Table 6.5: Major enablers and inhibitors of Internet technology adoption within the perceived customer/organisational relationship category in both banking industries.

	Omani banking		**Australian banking**	
Focused issues	**Enablers**	**Inhibitors**	**Enablers**	**Inhibitors**
Customer trust		Security		Security
Customer commitment		Customer loyalty	Customer loyalty	
Customer satisfaction	Reduce conflict		Reduce conflict	

The field findings of this study reveal that managers in both banking industries expect their relationship with their customers could be affected by the adoption of Internet technology. Consequently, these managers have a greater motivation to adopt Internet technology in their banking industry. This suggests that the decision

to adopt Internet technology is based on what managers perceive about CR in the banking industry. The findings of this study are consistent with a theoretical stance argued in the extant literature in Chapter 2 (e.g., Sathye, 1999; Athanassopoulos, 2000; Anderson and Srinivasan, 2003). The summarised field findings are discussed under two headings: Omani banking industry and Australian banking industry.

Omani Banking Industry

In this field investigation, the majority of Omani respondents demonstrated that the perceived customer/organisational relationship could affect Internet technology adoption in their banking industry. This means that perceived customer/organisational relationship is important when making a decision to adopt Internet technology in the banking industry. Table 6.6 summarises the major enablers and inhibitors of Internet technology adoption in the Omani banking industry.

Table 6.6: Major enablers and inhibitors of Internet technology adoption within the perceived customer/organisational relationship category in the Omani banking industry.

Major enabling themes	*Major inhibiting themes*
Customers satisfaction (e.g., reduce conflict)	Customers trust (e.g., Internet security)
	Customers commitment (e.g., customer loyalty)

The findings of this study show that Omani bank managers expect to satisfy their customers, e.g., reduce conflict between bank and customers. Consequently, the managers in the Omani banking industry have a tendency to adopt Internet technology. However, several challenges were also found amongst managers in the Omani banking industry, including: customer trust (e.g., Internet security) and customer commitment (e.g., customer loyalty). Most respondents did not perceive that Internet technology adoption could improve their customers trust. They believe that their customers feared that their privacy might be invaded on the Internet.

Moreover, they did not perceive that Internet technology could improve their customer commitment to banks because they expected customer loyalty to improve through a close relationship with bank branches and personal services. Indeed, this view has implications on the way banks conduct their business. For example, banks have the option of conducting their banking business either on the basis of pure Internet banking or on the basis of branch and Internet. Nevertheless, the Omani banking industry has a long way to go on the Internet because there are certain challenges that need to be addressed at the banking industry level. So unless the Omani banks address the problems of customer trust and customer' commitment in their industry, they will not be able to improve their perception about customer/organisational relationship and hence Internet technology adoption. This means that the Omani banking industry needs to rethink its strategy if it wishes to go online.

Australian Banking industry

The majority of Australian respondents also demonstrated that perceived customer/organisational can influence Internet technology adoption in their banking industry. Therefore, when making a decision to adopt Internet technology in the banking industry it is important to consider managers' perception about customer/organisational relationship in the process. The major enablers and inhibitors of Internet technology adoption in the Australian banking industry is summarised in Table 6.7.

Table 6.7: Major enablers and inhibitors of Internet technology adoption within the perceived customer/organisational relationship category in the Australian banking industry.

Major enablers	*Major inhibiters*
Customers commitment (e.g., customer loyalty)	Customers trust (e.g., Internet security)
Customers satisfaction (e.g., reduce conflict)	

In the Australian banking industry, managers believe that customer commitment (e.g., customer loyalty) and customer satisfaction (e.g., reduction of conflict) could be achieved on the Internet. In this study, customer commitment and customer satisfaction are considered as major enablers of Internet technology because they can motivate managers to adopt Internet technology in the banking industry. This suggests that the Australian banks have taken full advantage of Internet technology to offer their customers Internet banking services besides their branch banking services, to strengthen their relationship with their customers. Therefore, it can be concluded that banks in Australia have managed, to some extent, to improve their relationship with their customers on the Internet. However, they perceived that a major problem for them on the Internet was customer trust (e.g., Internet security). Indeed, this is a challenge for them because it slows them down in the area of Internet technology adoption. Nevertheless, most managers recognise this problem and are working continuously to manage it through the adoption of precautionary procedures and awareness. Both managers from Oman and Australia expect to improve productivity of their employees (e.g., improving business efficiency) on the Internet.

In summary, the extant literature (e.g., Sathye, 1999; Athanassopoulos, 2000; Anderson and Srinivasan, 2003) demonstrated that, theoretically, perceived customer/organisational relationship is important on the Internet. This means that perceived customer/organisational relationship is linked to the process of adopting the Internet technology in the banking industry. This study's findings demonstrate a consistency with this notion.. The findings of this study include the following.

- both banking industries agreed that customers trust (e.g., Internet security) was an inhibiting factor for Internet technology adoption. Indeed, lack of Internet security could have the potential to affect the customer relationship. It was obvious that lack of Internet security was a major threat to the banking industry success on the Internet due to ongoing problems (e.g., hacking and invasion of privacy). This means that the problem of lack of security needs to be continuously addressed by both early and late adopters of Internet technology.
- Both banking industries agreed that customer satisfaction (e.g., reducing conflict between the banks and customers) was important to satisfy customers. There was no doubt that poor communication between customers and banks could damage the relationship between them.

- Omani managers disagreed with Australian managers on the issue of customer commitment. The Omani banking industry believed that customer loyalty could not be improved on the Internet whereas the Australian banking industry believed that this was possible. For example, the authors Reichheld and Schefter (2000); Vatanasombut et al. (2004); and Verona and Prandelli (2002) argued that it is harder to maintain customers on the Internet than via the traditional distribution channel. It was hard to create a barrier to entry on the Internet e.g., it was much easier to copy services, procedures and systems, they explained. However, the authors suggested that customer loyalty was achieved in the long-term by continuously creating values for customers. It was obvious to see that the Australian banking industry supported the notion of sustaining customer loyalty on the Internet. Moreover, the Australian banking industry is much larger than the Omani banking industry and the above authors indicated that it was possible for a large organisation to maintain customers due to its reputation and capability in the industry.

6.3.4 Perceived Ease of Use (EOU)

The link between perceived ease of use (hereafter EOU) and the rate of Internet technology adoption has received considerable attention in the extant literature reviewed in Chapter 2. For example, Davis et al., (1989); Venkatesh, (1999); Ramsey and Smith, (1999) stressed the importance of considering EOU in the process of adopting Internet technology. This means that the more a bank manager knows (e.g., with less inhibiting concerns) about EOU the more he/she would be motivated to adopt Internet technology in the banking industry.

In this investigation it was possible to explore managers' perception of EOU and the influence of these perceptions on the adoption of Internet technology in the banking industry. In the semi-structured interview, participants were asked whether or not they believed that Internet technology was easy to use in the context of their banking industry. Three major issues were identified in the extant literature in Chapter 2: 'easy to navigate'; 'easy to learn'; and 'easy to manage'. Table 6.8 contains the field findings summary of the EOU from the analysis in Chapter 5.

Table 6.8: Major enablers and inhibitors of Internet technology adoption within the perceived ease of use category in both banking industries.

	Oman banking		Australian banking	
Focused issues	**Enablers**	**Inhibitors**	**Enablers**	**Inhibitors**
Easy to navigate		Awareness about Internet technology	User friendly	
		Accessibility of service	Accessibility of service	
Easy to learn	Increased automation of process		Awareness about Internet technology	
Easy to manage			Customisation of services (language/ terminology)	
			Online tracking of banking transactions	

The investigation of this study found that EOU is associated with the process of making a decision to adopt Internet technology in the banking industry.

The findings of this study suggest that the decision to adopt Internet technology is based on managers' perceptions about EOU in the banking industry, and are consistent with the extant literature in Chapter 2 (e.g., Davis et al., 1989; Venkatesh, 1999; Ramsey and Smith, 1999). The discussion on the summarised field findings is organised under two headings: Omani banking industry and Australian banking industry.

Omani Banking Industry

The perceptions of a majority of Omani managers revealed that EOU can influence Internet technology adoption in their banking industry. This suggests that EOU is important in the decision to adopt Internet technology. The major enablers and inhibitors of Internet technology adoption within the category of EOU in the Omani banking industry are summarised in Table 6.9.

Table 6.9: Major enablers and inhibitors of Internet technology adoption within perceived ease of use category in the Omani banking industry.

Major enablers	*Major inhibitors*
Easy to learn (e.g., increased automation of process)	Easy to navigate (e.g., awareness/knowledge about Internet technology and accessibility of services)

The findings of this study, reveal that the managers in Omani banking believe that Internet technology is easy to learn (e.g., increased automation of process). Because most banking services can be automated, consequently there is a reduction in the number of processes required to accomplish banking transactions. Indeed, customers do not have to go through a lot of paperwork to do banking transactions. However, the question is: how would the Omani banking industry overcome the problem of authentication of documents on the Internet when doing banking transactions over the Internet? It seems that an online authentication of documents would have major implication on ease of using the Internet technology. Perhaps this could offer an avenue for future research to find out how the banking industry manages this problem during adoption of Internet technology. As a result of greater understanding about the easiness of learning on the Internet, the tendency of Omani managers to adopt Internet technology is greater.

On the other hand, Omani managers believe that it is not easy to navigate on the Internet (e.g., lack of awareness/knowledge about Internet technology and accessibility of services). Al-Wohaibi et al (2002) pointed out that Oman's economy lacked skilled workers, consequently most organisations relied heavily on foreign skilled workers. In general, it seems that the Internet technology infrastructure has a long way to go in Oman in terms of reaching most areas in the country. For example, some regional areas hardly have any Internet cafés. Moreover, public libraries and universities do not offer Internet access to the public.

Indeed, the difficulty of navigating on the Internet is considered a challenge for the Omani banking industry. The Omani banking industry needs to address the problems of lack of awareness/knowledge about Internet technology and accessibility of services online. These inhibiting concerns raise the question of whether or not the Omani banking industry has the capability to offer support and training for their customers. Venkatesh *(1999)* suggested that training would offer

more benefit than redesigning the system to overcome the challenges of EOU. These concerns are certainly worthy of attention by the whole Omani banking industry. If it wishes to improve the rate of adoption it will need to address the issue of easy to navigate on the Internet in its strategy.

Australian Banking Industry

In the Australian banking industry, it was found that EOU provides a broader understanding of Internet technology adoption in the banking industry. Table 6.10 summarises the major enablers and inhibitors of Internet technology adoption in the Australian banking industry within the category of EOU.

Table 6.10: Major enablers of Internet technology adoption within perceived ease of use category in the Australian banking industry.

Major enablers
Easy to navigate (e.g., user friendly and accessibility of service)
Easy to learn (e.g., awareness/knowledge about Internet technology)
Easy to manage (e.g., customisation of banking services and an online tracking of banking/financial services)

This investigation revealed that managers perceive that the Internet technology is easy to navigate (e.g., user friendly and service is accessible), Easy to learn (e.g., awareness/knowledge about Internet technology), and Easy to manage (e.g., customisation of banking services and an online tracking of banking/financial services). The Australian banking industry perceives no difficulty in terms of navigating, learning and managing the Internet technology. This suggests that most of the challenges to use, to learn and to manage the Internet have been continuously addressed by the Australian banking industry. Consequently, this has motivated the Australian banking industry to adopt Internet technology. Following on from this finding, it is reasonable to draw the conclusion that Internet technology adoption in the Australia banking industry is well developed.

Moreover, the Australian banking industry has the experience and knowledge to deal with the challenges of ease of use. Being a larger industry than the Omani banking industry, the Australiana banking industry has the resources and capability to train its staff and customers, who could improve their perceptions about ease of use and hence could, increase the rate of Internet technology adoption.

In summary, it was found that Australian banking managers perceived no difficulties in using the Internet technology in their industry whereas the Omani banking industry perceived a difficulty in navigating on the Internet. The Omani managers highlighted part of this difficulty as lack of awareness/knowledge about Internet technology and accessibility of services. Indeed, this inhibits the Omani banking industry from adopting Internet technology. So, unless the Omani banking industry addresses this problem the rate of Internet technology adoption will not be improved. The findings reveal that the Omani banking industry faces a major challenge in the area of using the Internet. At the national level, Al-Wohaibi (2002) claimed that human resource deficiency is a major problem in Oman. However, Abdul-Ghadir and Kozar (1995) argued that computer knowledge, experience and educational level could contribute significantly to the process of increasing the rate of Internet adoption in the GCC countries.

Moreover, the authors (Davis and Venkatesh, 1996; Venkatesh, 1999) suggested that it was more beneficial to focus on training rather than on system design. The findings of this study are consistent with previous studies (Davis et al., 1989; Venkatesh, 1999; Ramsey and Smith, 1999).

6.4 Implications and recommendations for the Omani banking industry

The banks that stay behind will not be able to embrace Internet technology and the benefits it is claimed to bring and hence will not be able to compete in the industry or in international markets (Porter, 2001). This will also have consequences on the economy. For example, the Omani economy will not improve if banks stay behind. This means that Internet technology is an important tool in the new economy and hence should not be ignored.

The literature review and the field findings indicate that the banking industry in Oman cannot ignore Internet technology if it seeks to remain competitive in the industry, because both locally and globally, competition is increasingly growing. In this investigation, enabling and inhibiting factors of Internet technology adoption were explored comprehensively and the motivation for adopting and not adopting Internet technology was explained for the banking industry. If banks in Oman seek leadership in the competitive banking industry then they need to change. The practical implications and recommendations offered are as follows.

The literature review and responses from managers in both banking industries of Oman (non-adopter) and Australia (adopter) indicated that the eventual adoption of Internet technology is inevitable. If the Omani banks want to succeed in their industry locally as well as globally they ought to confront these challenges of Internet technology adoption by minimising the inhibiting factors. This study explores the enablers and inhibitors in order to inform the Omani banking industry about the more mature Australian experience in the area of Internet technology adoption.

The findings of this study have many practical implications for Internet technology adoption in the Omani banking industry. They offer guidelines for banks that wishto adopt Internet technology in their industry. Table 6.11 shows the implications and recommendations for the Omani banking industry.

Table 6.11: Implications and recommendations for the Omani banking industry.

Inhibiting factors	Implications	Recommendation
Perceived P: Major inhibiting concerns (Omani banking industry): Profitability (e.g., high technology investment cost and the need for economies of scale for Internet technology use.	Internet technology adoption has major implications on banks' performance and hence economy. It could affect marketing mix in the industry (Kettinger et al., 1994). The privatisation of the Oman Telecommunication Company (Omantel) is a good forward step for Omantel to play its role in the economy. This means that the banking industry also expects changes from Omantel, such as improvement in telecommunication services, the expansion of telecommunication services, and quality of delivering telecommunication services and cost of delivering the service. Of course the change in telecommunication services will have positive implications on the growth of the Internet population as well as on the geographical distribution of Internet services. In addition, , it is expected that the number of Internet cafés will grow beside home Internet and business Internet. Moreover, the development of an Internet village is expected to offer awareness of Internet	To reduce this inhibiting factor, King and Teo (1996) suggested a focus on economies of scale for Internet technology use. However, others (Reichheld and Schefter, 2000; Lavender, 2004; Anandarjan and Wen, 1997) argued that most IT/IS decision-makers ignore intangible cost/benefits. Therefore, the Omani banking industry ought to consider intangible cost/benefits in their IT/IS decisions.

	technology in the region. E-government is also expected to play a major role in e-payment as it expands. Of course, improvement in telecommunication infrastructure and services, Internet village and e-government will have positive implication on the economic scale of Internet use and the cost of offering Internet banking services. Hence banks will be motivated to invest in the Internet technology.	
Perceived CR: Major inhibiting concerns are: customers trust (e.g., Internet security) and customer commitment (e.g., customer loyalty)	Internet technology adoption has the potential to affect the relationship between customers and banks. For example, it could improve or destroy the relationship	To improve customers/banks relationship banks ought to consider reducing factors inhibiting improvement in the relationship. For example, Whitman (2004) argued that people lack understanding of threats to information security. Others (Gefen 2002; Khalfan, 2004; Mukherjee and Nath, 2003) reported that Internet security was a major concern in trusting the Internet. Therefore, the Omani banking industry needs to continually address Internet security concerns through learning, making backups, and implementing secure systems, databases and networks (Bowers 2001). On the other hand, some authors (Reichheld and Schefter, 2000; Vatanasombut et al.,

		2004; Julian and Ramaseshan, 1994) mentioned that it was hard to win customer loyalty on the Internet. Therefore, if the Oman banking industry wants to win customer loyalty on the Internet then it will need to focus on continually creating values as well as having a long-term plan.
Perceived EOU: The major inhibiting concern is ease of navigation on the Internet (e.g., lack of awareness/knowledge about Internet technology and accessibility of service).	Successful adoption of IT/IS depends on how easy it is to for users to use (Davis et al., 1989; Moore and Benbasat, 1991; Taylor and Todd, 1995a).	To reduce these inhibiting concerns Venkatesh and Davis (1996); Davis and Venkatesh (2004); and Abdul-Gader and Kozar, (1995) suggest that training could improve awareness/knowledge about Internet technology and hence increase favourable perceptions about ease of use. On the other hand Karahanna and Limayem (2000) suggested that users should have both physical and informational access to the IT/IS. To ensure physical and informational access to customers of Omani banks need to address the issue of Internet navigation with telecommunication companies. Al-Wohaibi et al. (2002) suggested that the Omani government organisations need to focus on the

		development of IS/IT awareness in school and universities if they want to increase the rate of successful IS/IT implementation. They also suggested that banking should consider IT training in its strategic plan as well as supporting it financially to make it work. Consistent with Al-Wohaibi et al. (2002), I believe these suggestions have two important benefits. One is that the Omani banks would be able to develop Internet technology/bank services awareness smoothly when they introduce it to their customers in the industry through a series of seminars, training, online manuals, and an online support without having to invest a lot of money to train and educate their customers. The second benefit would be that the Omani banks would also be able to educate their employees through a series of technical seminars and short-term courses to advance their employees' skills so that they could support their Internet technology infrastructure.

6.5 Implications and recommendations for future research

The areas beyond the scope of this study, which can be investigated further are the following:

- Further investigation into other countries or other industries would improve the generalisability of the findings of this thesis.
- Similar investigation into small, medium and large organisations in the industry may produce different findings. Moreover, investigations at different levels of management could bring new knowledge into the area of Internet technology adoption.
- Expansion of the population sample to include many countries may generate different findings.
- Adopting a quantitative approach may support the results found in this study.
- Identifying the inter-relationships between RA, EOU, P, and CR was beyond the scope of this study.
- The author of this research was interested in exploring the four perceptions jointly for the purpose of broadening understanding of Internet technology adoption in the banking industry. Therefore he did attempt to determine which was the most significant factor, and this could be a useful area for further research.

6.6 Limitations of this investigation

The research was subject to two limitations: the reluctant to participate by Australian bankers; and the restriction to two countries.

(1) Reluctant To Participate

Great difficulty was encountered in arranging interviews with Australian bankers. Eventually, some officers of appropriate standing agreed to participate and gave willing of their time. However, several hoped for interviews did not eventuate thus restricting the depth of the information gathered about some Australian banks.

(2) Restriction to two countries

The fact that only two countries were involved places limits on the statistical generalisability of the findings. This limitation was imposed by the availability of resources – time and funds – and language differences.

Because of the procedures adopted during the collection of data – interview protocol, diary of events and chain of evince, as recommended by Yin (2003) – it is considered that all threats to internal and external validity were appropriately countered.

6.7 Concluding comments

The purpose of this study was to explore what were the enablers and inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry in order to inform the Omani banking industry with the more mature Australian experience.

There were three stages in the accomplishment of the purpose of this thesis.

(1) Review of extant literature to explore the major research issues and the theoretical framework for broadening our understanding of Internet technology adoption in the banking industry.

(2) Qualitative research methodologies were utilised to gather field evidence that could assist in a deep understanding of Internet technology adoption in the two banking industries of Oman (non-adopter) and Australia (adopter).

(3) Qualitative analysis was carried out to explore patterns within semi-structured interviews.

From an analysis of 27 semi-structured interviews it was possible to find key enabling factors in the Omani banking industry.

The findings reported in this study suggested that four perceptions, namely, perceived relative advantage (hereafter R), perceived organisational performance (hereafter P), perceived customer/organisational relationship (hereafter CR) and perceived ease of use (hereafter EOU) jointly provided a broader understanding of Internet technology adoption in the banking industry than was possible using TRA, TPB, TAM and DIT. Figure 6.1,6. 2, 6.3, and 6.4 summarises the above points.

- Figure 6.1 and 6.3 show that the enabling factors (RA, P, CR, and EOU) provided a broader understanding of the motivating factors to adopt Internet technology in the banking industry of Oman and Australia.

- Figure 6.2 and 6.4 shows that the Omani banking industry has more inhibiting factors than Australian. This suggests that if the Omani banking

industry wishes to increase the rate of Internet technology adoption it will need to address these inhibiting factors aggressively.

The main contributions of this thesis are:

The literature review in Chapter 2 explored: (1) two research issues previously examined, namely: perceived relative advantage (RA) and perceived ease of use (EOU) and (2) two other research issues not previously examined namely: perceived organisational performance (P) and perceived customer/organisational relationship (CR). Moreover, the literature review in Chapter 3 explored four major theories/models, namely: (1) theory of reasoned action (TRA- introduced by Fishbein and Ajzen, 175; Ajzen and Fishbein, 1980); (2) theory of planned behaviour (TPB- introduced by Ajzen, 1991); (3) technology acceptance model (TAM- introduced by Davis et al. (1989); and (3) diffusion of innovation theory (DIT- introduced by Rogers (1995). These theories/models have previously been applied to understand IT/IS adoption, mostly in developed countries. Very little attention has been paid to developing countries.

Specifically, this study will contribute to the body of knowledge by:

- Helping to solve the existing problem (lack of Internet technology adoption) in the Omani banking industry.
- Expanding the TRA, TPB, TAM and DIT to include two variables previously not considered – perceived organisational performance (P) and perceived customer/organisational relationship (CR). It is expected that these four variables will jointly provide a better understanding of the Internet technology adoption in the banking industry;
- Expand understanding of Internet technology adoption in a developing country, namely, Oman, and compare this with the experiences in developed countries such as Australia;

Finally, it can be concluded that the four-enabling/inhibiting factors of RA, EOU, P, and CR can provide a better understanding of Internet technology adoption in the banking industry.

Figure 6.1: Enabling factors in the Omani banking industry.

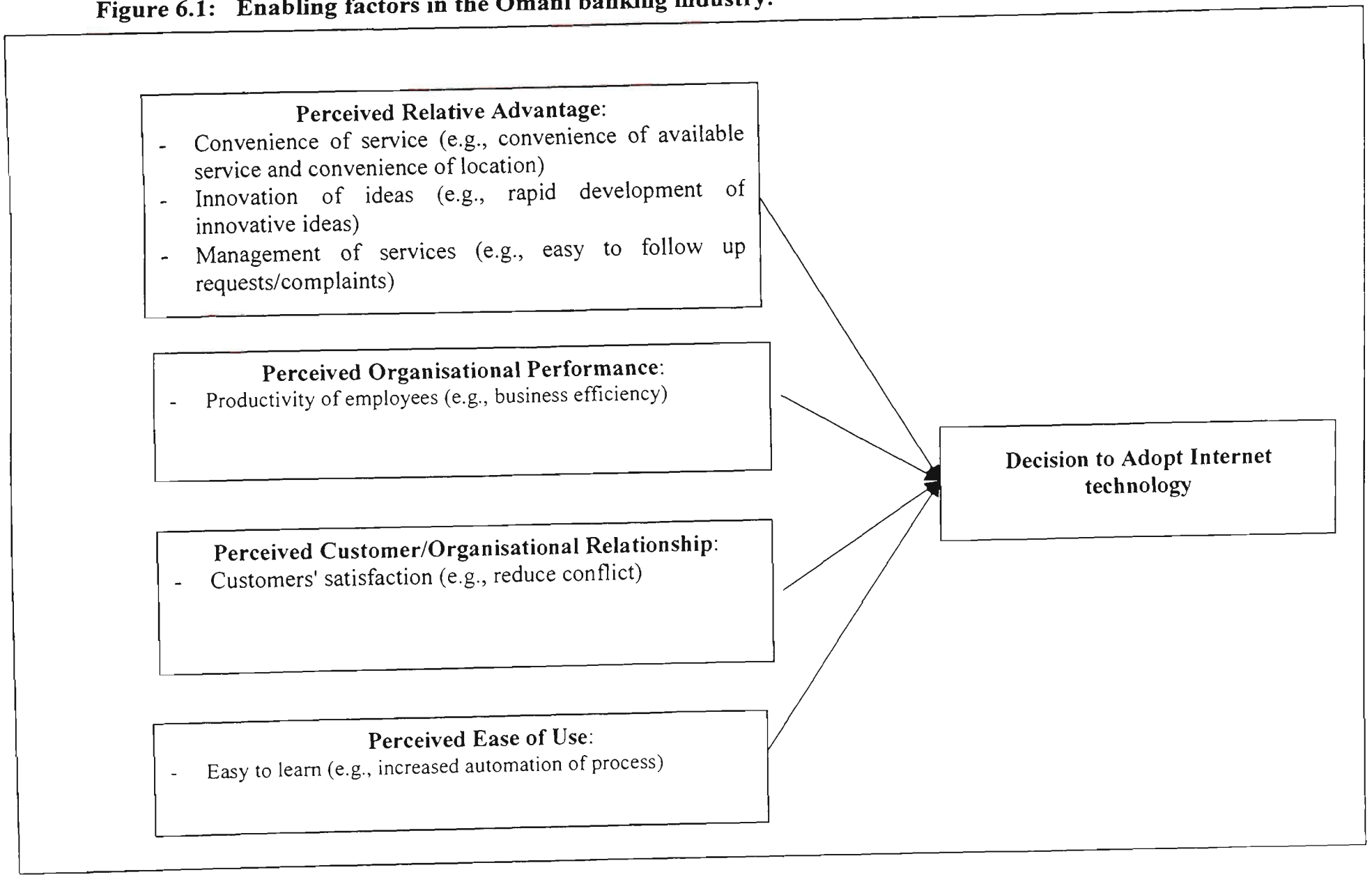


Figure 6.2: Inhibiting factors in the Omani banking industry.

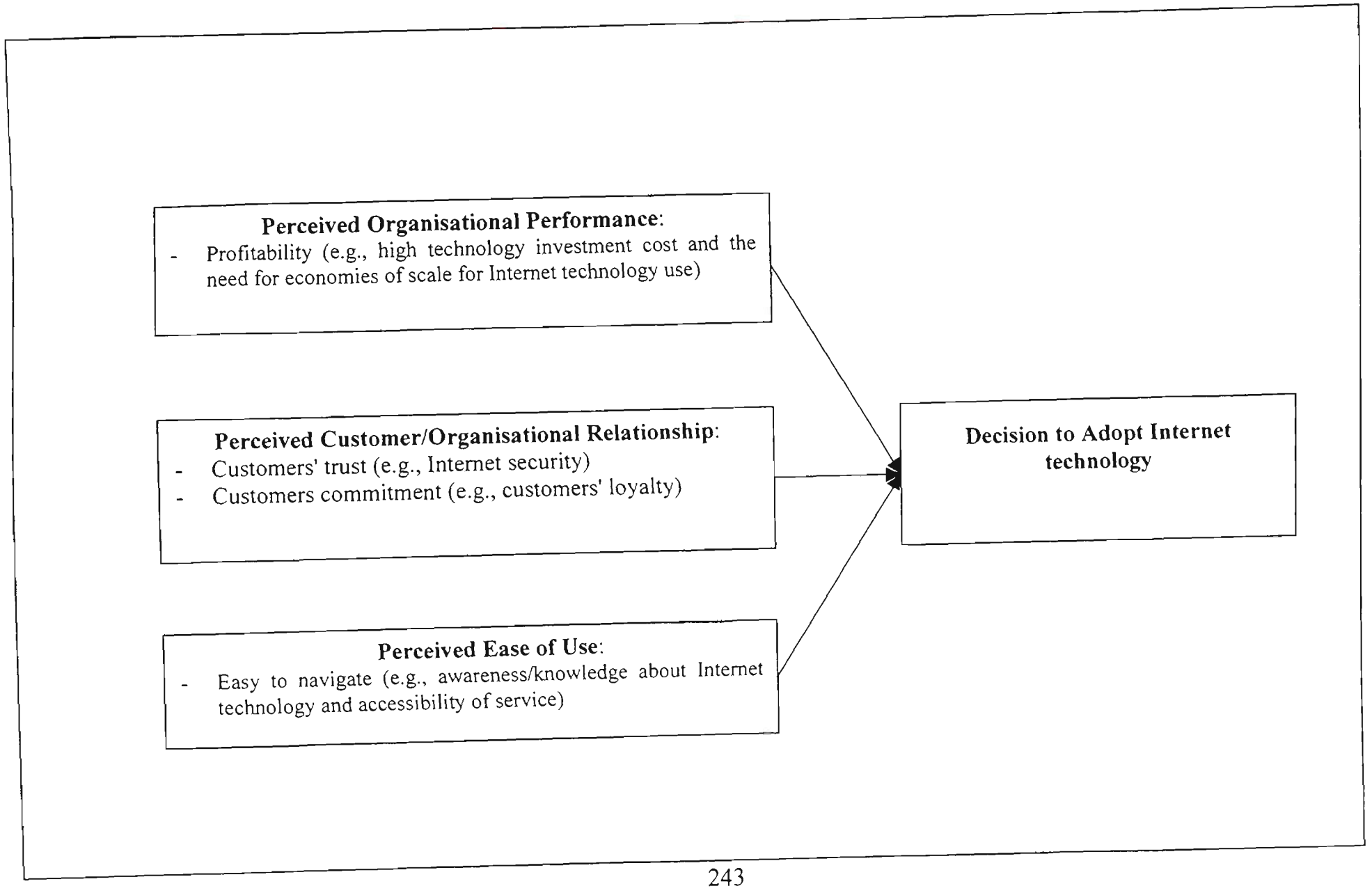


Figure 6.3: Enabling factors in the Australian banking industry.

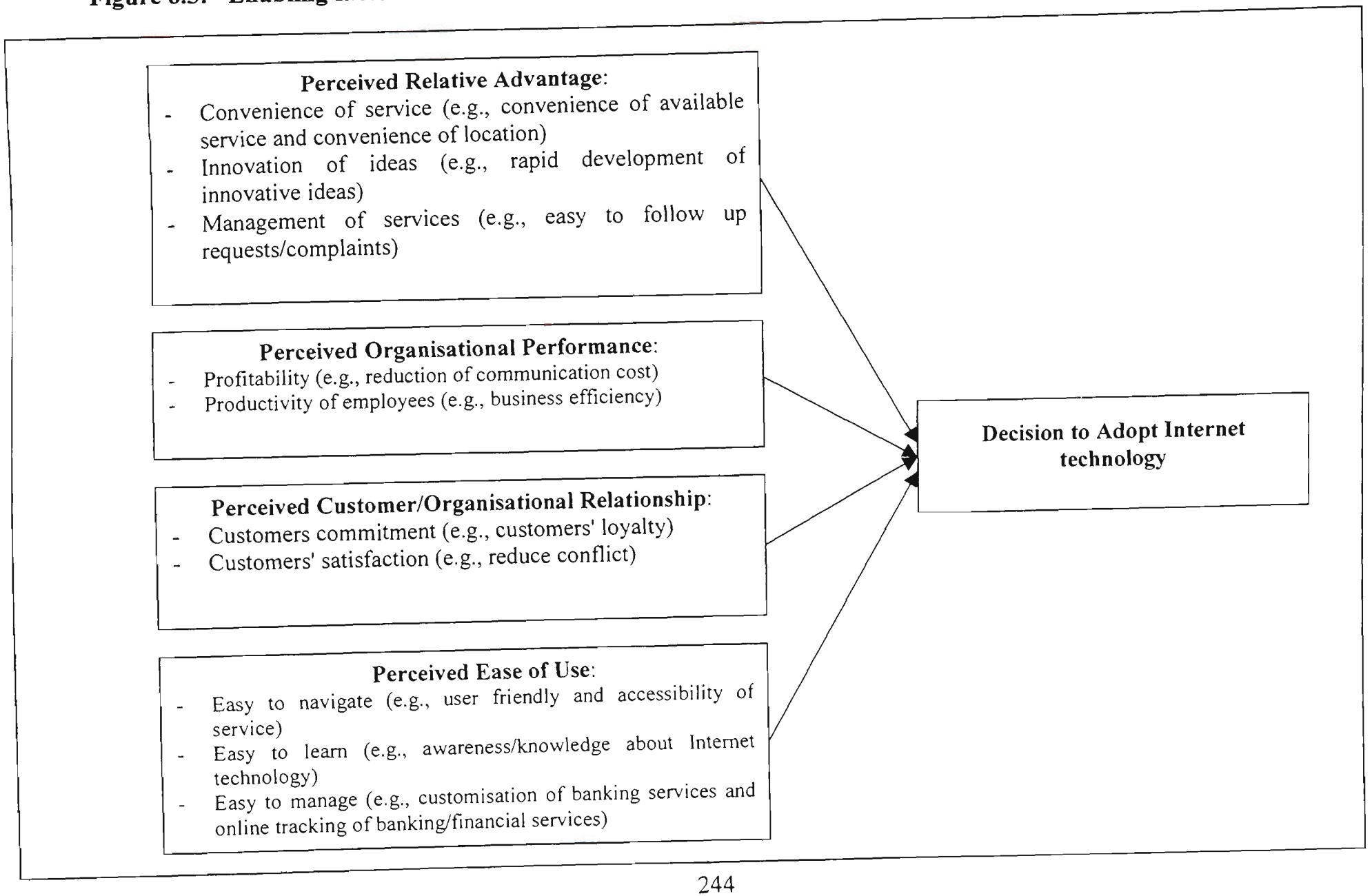
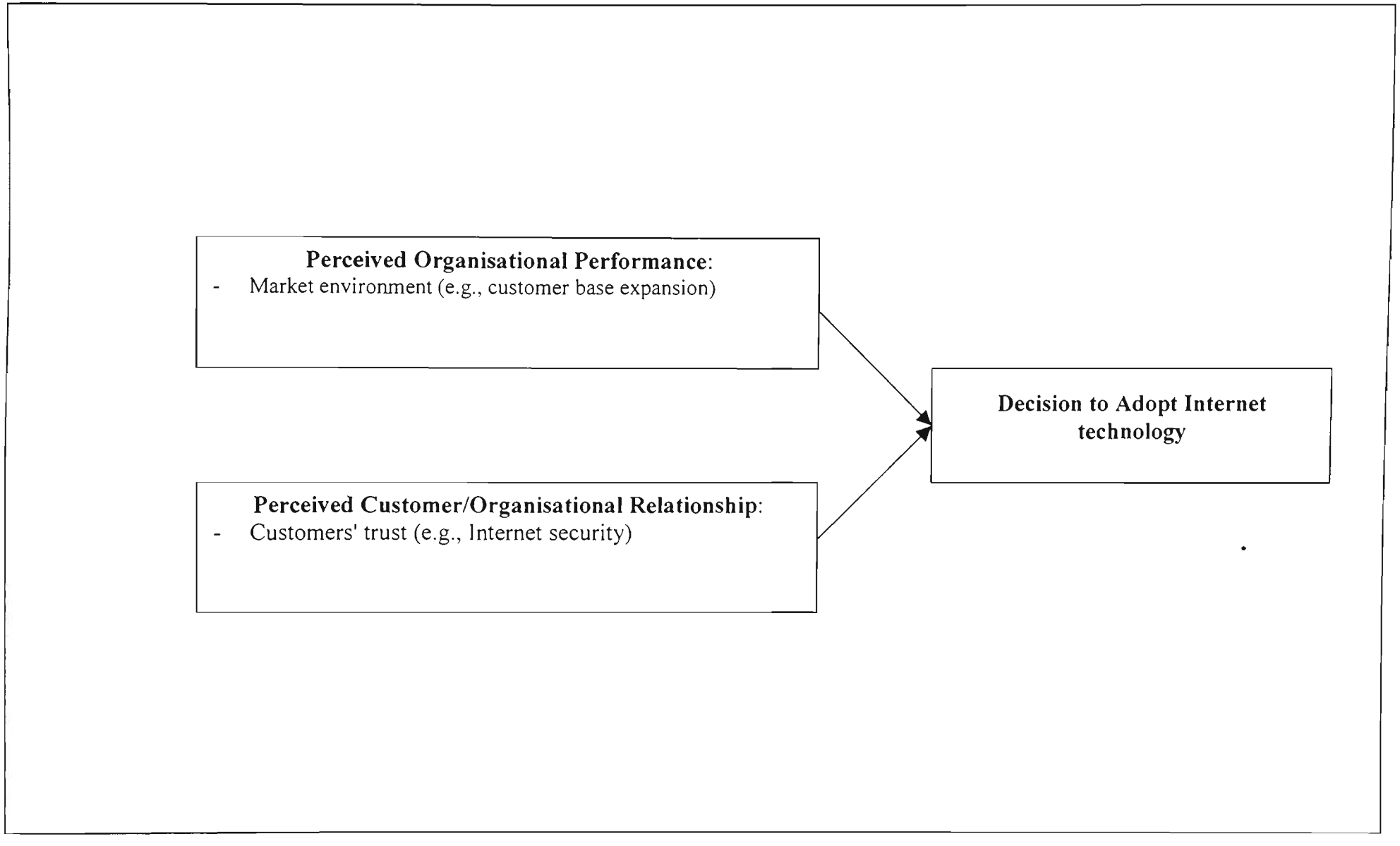


Figure 6.4: Inhibiting factors in the Australian banking industry



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Appendix A: Sample of Letters Sent To Participants

Strategic Manager/General Manager/Managing Director

Tactical Manager/Assistant General Manager

Operational Manager/Bank Branch Manager

Dear Participants

I am working towards a Doctoral of Philosophy degree through the School of Accounting and Finance at the Victoria University of Technology. The research study being undertaken seeks to determine inhibitors and enablers of adoption of Internet technology in the Australian banking industry and in the Omani banking industry and inform the banking industry in Australia and Oman with the best practice.

To ensure the validity and reliability of results a manager at each of the three different levels – strategic, tactical and operational in your bank are invited to participate for the in-depth interview, with each interview expected to take 45-60 minutes.

In-depth interview will be conducted with a manager at each of the three different levels in your bank to obtain a broader understanding of a manager's beliefs, feelings and intentions to adopt Internet technology in the banking industry. Moreover, demographic information about a manager's and a bank's characteristics will be obtained at the interview to support the validity and reliability of the results.

Interview will contain questions relating to managers' beliefs, feelings and intentions about Internet technology adoption in the banking industry in Australia and Oman, respectively.

You are invited to participate in this study and your cooperation is valued. To ensure accuracy of responses, it is planned subject to your consent, to audiotape the interview. The results will be used only in an aggregated form and therefore your **anonymity** and the **confidentiality** of your response are **assured**. The completed interview will be securely stored and available only to my academic supervisors and my self. The results will be published in an aggregated form in the thesis, which will be available at the Victoria University of Technology. It is also hoped that aspects of the results will be published in aggregated in various professional and academics journals.

I will contact you personally within one week and, if you agree, we could schedule a convenient time for an interview. Should you have any queries regarding the study or interview, please feel free to contact me at the address below:

	Australia	Oman
Address	9/78 Droop Street,	P.O. Box 402
	Footscray, Vic. 3011, Australia.	Al-Harthy Complex, P.C. 118, Muscat, Oman.
Phone	(613) 96870104 or (613) 96885251	(968) 486153
Mobile	(613) 0402933291	(968) 9459472
E-mail	Salim_amor@hotmail.com	Salim_amor@hotmail.com

or my senior supervisor Professor Robert Clift on e-mail: bob.clift@vu.edu.au or phone: (613) 98784 187.

Yours faithfully,

Salim Al-Hajri

(Doctoral Student)

Professor R.Clift

(Senior Supervisor)

1st April 2003

TO WHOM IT MAY CONCERN

Mr. Salim Amor Al-Hajri is a candidate for the research degree of Doctor of Philosophy at the Victoria University of Technology. The title of his project is "Internet technology adoption in the banking industry". His research study seeks to determine inhibitors and enablers of Internet technology adoption in the Banking industry in two countries, namely: (1) Australia and (2) Oman.

Successful completion of that research requires the collection of information through deep interviews with managers at three levels namely: (1) strategic; (2) tactical and (3) operational in the banking industry in these two countries.

Please note that the researcher has successfully completed the collection of information about Internet technology adoption through deep interviews with managers at three different levels from the banking industry in Oman and he is looking forward to similar information about Internet technology adoption in the banking industry in Australia.

The outcome of this research project will contribute in guiding managers on how to adopt Internet technology in the banking industry successfully.

Your participation in this research would be greatly valued. Under the rules of the University, the anonymity of participants and the confidentiality of their responses are guaranteed.

Mr. Al-Hajri is working under my supervision. I can be contacted on

Robert.clift@rmit.edu.au

Thanking you in anticipation,

Yours sincerely,

Professor R C Clift

Visiting Fellow

Strategic Manager/ Tactical Manager/ Operational Manager

Dear Participants

Subject: Checking and verifying the validity of the information collected from the interview conducted with you about the Internet technology adoption in your bank

Thank you very much for the interview that I had with you regarding the research study of **"Internet Technology Adoption In The Banking Industry"** in your Bank using audiotape and note taking. From this interview I produced the attached transcript document using the audiotape and note taking. However, as part of my research study, I am required to ensure accuracy of the information collected from the interview with you. Therefore, I would appreciate your help in going through the attached document to check if:

i. it contains any errors and

ii. to capture any additional information

that could lead me to answer correctly my research question. If you find any errors or wish to include any additional information relating to my research study please feel free to do so on the attached document or you can attach a clean sheet of paper indicating the place of amendments or insertion (e.g. page number, paragraph and line).

I will contact you personally or by e-mail or by phone after two week to collect the final version of the transcript document with your amendments and insertions. However, if I do not receive your amendments or insertions two weeks after you have been contacted I will assume that the transcript document is correct, and you wish to include no additional information and that the transcript document is final.

Thank you again for your cooperation and your valued information, which I believe will contribute significantly to this valuable research work.

Should you have any queries regarding the study or interview, please feel free to contact me within these two weeks at the address below:

	Australia	Oman
Address	9/78 Droop Street, Footscray, Vic. 3011, Australia.	P.O. Box 402, Al-Harthy Complex, P.C. 118, Muscat, Oman.
Phone	(613) 96870104 or (613) 96885251	(968) 486153
Mobile	(613) 0414519773 or (613) 0402732072	
E-mail	Salim_amor@hotmail.com	Salim_amor@hotmail.com

or my senior supervisor Professor Robert Clift on e-mail: **robert.clift@rmit.edu.au** or phone: (613) 98784 187.

Yours faithfully,

Salim Amor Al-Hajri

Appendix B: Sample Of Consent Form

Victoria University of Technology

Sample Consent Form for Participants Involved in Research

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into... [.....].

CERTIFICATION BY PARTICIPANT

I,

of

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the experiment entitled: [.....].

being conducted at Victoria University of Technology by: [.....]

I certify that the objectives of the experiment, together with any risks to me associated with the procedures listed hereunder to be carried out in the experiment, have been fully explained to me by: [.....] and that I freely consent to participation involving the use on me of these procedures.

Procedures:

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this experiment at any time and that this withdrawal will not jeopardise me in any way. I have been informed that the information I provide will be kept confidential.

Signed: ..... }

Witness other than the experimenter: .....} **Date:** .....}

Any queries about your participation in this project may be directed to the researcher (Name: ..... ph. .....). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MC, Melbourne, 8001 (telephone no: 03-9688 4710).

[*please note: where the participant/s is aged under 18, separate parental consent is required; where the participant is unable to answer for themselves due to mental illness or disability, parental or guardian consent may be required.]

Appendix C: Sample of a Transcribed Document, Coding Report And Output of Results

Sample of a Transcribed Document

Interview with M16

22nd August 2003 at 10:10 a.m. In Melbourne

M16

So what am actually saying is, is customer's behaviour is actually changing. So before Internet banking customers might seek information about their bank account on a relatively infrequent basis. That is that they would ring up IVR or they'd go into a branch or they'd go to a ATM and they'd get a balance, or they'd want to know whether their salary had been deposited, or they'd want to know whether a certain amount had come out, and they might do that once a week. What we now find is that we have a very large proportion of our customers that access their account information daily and sometimes multiple times per day. So there's a significant change in what the customer is actually doing. We've given them a tool to get access to a lot more information about their actual account and transactions, and they're actually using it significantly and regularly. That's quite a difference.

Interviewer

So in that sense do you believe that the bank could offer convenient services to customers?

M16

Through Internet banking, absolutely yes.

Interviewer

Can you just give me an example of that?

M16

Type of service?

Interviewer

Yes

M16

Well bill payment and what we're now finding;

Interviewer

Is that because of convenience?

M16

Yes, because they now can get; have you heard of B-Pay View, do you know about it?

Interviewer

Yes

M16

There's a good example where they can get an email to say that their water bill is due. They can go into Internet banking and they can view the bill and they can pay the bill. They can do the whole lot seamlessly, quickly and it's all on-line. So that's something that just never existed before. And what that is, in terms of convenience its transferring money between accounts and between banks is something that's done more frequently now. So they use; do you know what Pay Anyone facilities are?

Interviewer

No

M16

In ANZ terminology, we have a facility called pay anyone. What that means is, I can go in and I can transfer money to basically any bank account, and I simply key into Internet banking the BSB of the bank, the account number, the amount, reference information and it just does the transfer. It's just called pay anyone.

Interviewer

So from one persons account to another persons account;

M16

Say I needed to give you or send you $500. I can just go on to Internet banking right now, and you told me your bank account details and I can just push that money to you and that would be in your account tomorrow. So normally, previously that would have to be write a cheque, post it, or use it as cash. People buying on-line for example; as an example of myself, I just purchased some material on e-bay, okay. I spoke to the person I was buying them goods from, it was an auction, and I just transferred the money straight to his account, I did that through Internet banking. That convenience

just didn't exist. So there's an example. We're seeing a lot of growth in that sort of pay anyone bill payment type facilities, they're growing quite rapidly.

Interviewer

And how about the convenience of doing the service at home or office?

M16

Yes. Being able to do it anywhere, at home, office. I rarely go to a branch myself and even more rarely do I write a cheque now. I almost never do it; I might write one cheque a year. So that convenience of; and I do nearly all of my banking through Internet banking.

Interviewer

How about for the offering a variety of services to different customers?

M16

To date that variety of services tends to be more around the variety of banking services. We would envisage over time that we would be offering more than banking services through that same facility.

Interviewer

So is there an advantage?

M16

Yes. So from a customer's point of view, not only could they be going to our website and buying banking products, they could be potentially buying other products or services. And there are already banks in the world that are doing that. In Europe for example, in particular parts of Europe its common to buy things like theatre tickets or movie tickets, you know, you can buy them on-line, you can go to an ATM and actually get the movie tickets, you can put your card in and out comes your movie ticket which you had previously bought on-line. Things like that. Other additional services like mobile phone top up, again, there's different things that we are doing and will be doing.

Interviewer

Well how about Internet enabling bank to offer better quality of services?

M16

The quality is probably one around just convenience. I don't know that; we offer the same products.

The one thing we do do, which is your next question about prices is that we provide accounts, we don't charge for electronic transactions. If you go into a branch, depending on the type of account you've got you may pay a fee for use of that transaction in the branch. Electronically we don't charge for that transfer, you know, so we're encouraging you to not use the branch.

Interviewer

Why, is that more costly?

M16

Significantly more costly. It may cost us somewhere between; look on average it might cost us say $5 to do a transaction in the branch, it might cost us 10 cents to do that transaction on Internet banking. That's our cost, so it's a significant difference. So we do reward customers who use electronic channels. You know the principal is becoming you- do it yourself and we wont charge you, if you get us to do it for you then we'll charge you. Okay.

Interviewer

How about introducing new ideas to customers?

M16

Yeah we do that. We use it not as well as we could, but we use it as a bit of a marketing medium. So when you're on Internet banking we will attempt to give you messages around products, options, etc. We do that for very limited; what I mean is it's a one size fits all, all customers tend to get the same message. What we would see happening in the future is that we could be more targeted with that message. So we already know that you have this product, so then we may offer you information about this product or a related product. We don't do that now.

Interviewer

Well how about the bank managing customer services better?

M16

Not necessarily to date

Interviewer

In what way?

M16

Because it's limited. Internet banking for us at the moment is a more transactional thing. People get on and use it to do transactions. If they wish to request something, change their address, lodge a complaint, they tend to ring or go into a branch, they don't tend to use Internet banking for that. So the volume of that sort of activity is very, very, very low on-line. We provide a facility where they can message us in Internet banking but it's not highly used.

Interviewer

So the customers still go to branch?

M16

If they have a complaint or if they want something, like they want to change some information, they want to tell us something about them or they want to request a new service, or they want to request something they tend to ring the contact centre or go to a branch, they do both. They don't tend to email a message for example. We get them but it's not very high, they don't tend to do that on-line.

Interviewer

Yeah

M16

You know like if I'm going to ring [a Bank] and say can I please add a new account on to my list of electronic accounts, or can I please redraw some money out of my account. They can do those things on-line but they tend not to, they tend to make the call and I guess get confirmation that it has happened or talk to someone.

Interviewer

Why do you think that?

M16

I think security is an issue. Concern that we may not follow it up. If they send us an email message we guarantee to get back to them in, in like 48 hours. If they ring the contact centre they deal with the

operator there and then, and its done and resolved and its over. So it's not instant. Email is a bit of a store and forward type thing. We have a thing called Secure Mail, so we have a secure email service that Internet banking customers can use. But they send a message and they don't get an instant answer back, it might take us some hours or a day to respond and I think what they want is the instant. And if they go in to a branch and talk to a customer service person they get the instant resolution, the same if they ring the hot line, they get instant person talking and then resolving it. We don't have that instantaneous thing. What we need to do is build more of that; people can't change their addresses on-line because of fraud and security issues, right, and we need to get around that. Today, if they want to change their address then they've got to send us some information, we've got to process it and confirm it and get back to them, and the whole process can take a day or two. So that's why I think it doesn't get used.

Interviewer

Well how about presenting enough information to customers?

M16

We do do that. So on-line we have brochures, we have all sorts of information, you know they can just go to our website and find out anything about the types of home loans, products; we have calculators, information about our fees and charges, there's a lot of information presented on-line and it's a common way in which people find out products.

Interviewer

How about enhancing the image of the bank?

M16

Yes. It's a very important medium. We're very conscious of what's on the website. We're very conscious of Internet banking and the way it operates, how quick it is. And we do see that as a way of; you know there's a lot of information around the layout, we put a lot of effort in, we're very conscious that we're presenting the front line out to the customers. So a lot of work goes in to the layout, the way it looks. A whole lot of stuff is done because it is in fact the organisation that we're actually representing out there.

Interviewer

And why do you think that?

M16

Well it's important for the brand. It's got to work, it's got to be functional, it can't be sloppy, it can't be hard to use. If people go to our website; potentially a new customer might go to our website, if they don't find it easy to use, they don't find the information presented clearly they're turned off. At least that would be our view.

Interviewer

How about eliminating physical bank branches?

M16

No. We don't see that as a driver.

Interviewer

Why is that?

M16

It's not about eliminating whole branches; it's about changing what the branch does. So what we would rather do and in fact we have plans to open more branches, alright, and we've publicly stated that. What we want is, instead of people coming to a branch to do a name and address change; we would prefer that we could do that electronically. And then when they come to a branch we've got more time to actually service them properly. So what tends to happen is, the branches become extremely busy doing transactions and so what happens is they get queues, and so we have no time to really have a dialogue with that customer about what other needs they may have. If we can remove some of those transactions out of the queue, then we can spend more time with each customer and we can potentially sell them more and different products. So it's about changing why they come to a branch, it's not about eliminating the branch. And so we can put more emphasis in the branch on sales and service rather than on doing transactions.

Interviewer

Why do you think …mobile interrupted…. Can you elaborate more on the eliminating?

M16

If we eliminate branches; it's not about driving people out of branches, it's about changing what they

do in the branch. So the whole motive is not to eliminate branches. You still need a branch presence; you still need a front line out there on the street.

Interviewer

Why?

M16

But you cannot do all banking services on-line. There are issues around security and fraud that mean that we need to sight information, there are certain physical things that have to be; people getting a mortgage, and certain physical things have to actually happen. The other thing is, if it's all done on-line, like for example you might decide to get a home loan. Let's assume that they can do all of that on-line. The problem with that is that you'll come in buy your home loan and go. What we would like to do is sell you the home loan, also sell you a credit card, also open savings account, also get your salary credited into the savings account, also sell you some insurance on that house that you're about to buy, and you're not going to do that on-line. This needs to happen as a conversation, right. So if it's totally on-line, what we do is we would believe that we would not sell as many different products to that same customer and it's in our interest for you to have at least 3 products. Because if you have at least 3 products you're more likely to stick with us as a customer, right.

Interviewer

Yes

M16

So if we had no branches and everything was done totally on-line, we'd have a much narrower range of products and we'd just sell them individually. It wouldn't be this holistic, how can we manage your total financial circumstances, how can we give you the superannuation products, the insurance products, the savings products, and the mortgage product, and the credit card product, and that's what it is all about. Does that make sense?

Interviewer

Yeah. How strongly do you support your beliefs?

M16

Pretty strongly. It's probably very strongly.

Interviewer

Very strongly?

M16

Yeah very strongly.

Interviewer

Moving to beliefs about enhancing bank's performance. Do you believe that the Internet could enhance profitability?

M16

Yes

Interviewer

In what way?

M16

Reducing overheads of costs. Improved sales because staff in the branches; when there's a long queue at a branch, all a teller wants to do is do that transaction and get the customer out of the queue. And what we would prefer is that they can spend actually more time with the customer, and understand a bit more about whether there are additional services that we can help that customer with. That doesn't happen when there's queues. So if we can remove some of the basic transactions out of the queue that would be a better outcome.

Interviewer

How about improving market share growth?

M16

Yes. A good Internet banking solution can assist in growing our market share. As an example, ANZ in Australia has, I think for the last 3 years running won the award for the Best Internet Banking Solution. Now that's publicity, we use that, we market that, it's in industry, and customers can read that in the magazines and stuff. So if somebody is thinking of opening a new account and they see Internet banking as being important to them, they'll use word of mouth or whatever to decide yes,

this is a solution that would help them, you know its rich, its got lots of capability. It's going to potentially draw new customers to the bank, that then rubs off in terms of improving our overall result, market share.

Interviewer

Can you elaborate that in terms of, for example expanding existing market or enter new markets?

M16

Certainly it would expand the existing market. I don't know that; new markets is an interesting one. We currently operate dominantly in the Australian and New Zealand markets, and we operate all throughout those regions. We operate overseas, where there are far far more limited capacity. So I guess the context of what I'm talking about is, really the Australian New Zealand market in growing our market share in that existing markets, that's probably more where the emphasis is. I wouldn't see that we would be using this as a major launch in to growing overseas for example. We're not trying to compete in that space. We provide banking services is Asia for example; the Internet banking solution we provide in Asia is actually very different, it's not the same as this, it's on a much more smaller scale.

Interviewer

How about productivity?

M16

Well I guess that reflects what I said before. We would like the customers; simple things that a customer can do themselves is what we would prefer. So previously, if its withdrawing money, if its transferring money, if its paying a bill, if its changing some basic information about their personal details, we would prefer that they did that themselves. And we can use things like Internet banking to enable that, and that increases our internal productivity by lowering our cost and having that staff be able to respond more on a service and sales perspective, other things.

Interviewer

How strongly do you support your beliefs?

M16

It's pretty strongly.

Interviewer

Pretty strongly?

M16

Yeah, pretty strongly.

Interviewer

Now, moving to the beliefs about ease of use. A lot of people believe that the Internet could free the banking industry from the physical and mental effort. Do you believe that it is easy to access the Internet?

M16

For some people.

Interviewer

What do you mean?

M16

You've sort of broken that up into individual, small business, large business. We provide on-line solutions for all of those and we would argue they're fairly easy to use. But they're dominantly used by a younger age group, you know a younger demographic. Personally I've got; my father is in his 70's, he wont use an ATM even, he will not use an ATM, right, and you know, and I run the technology for an organisation that looks after ATM's and there's just no way he'll go near them. So a certain age group the use is quite high and it's obviously a younger and more computer literate age group. It doesn't vary much; I mean we have strong usage in, I think its something like about 25% to 30% of our customers actively use Internet banking, regularly. Small business customers is much higher, I can't tell you the exact number but a significant number of small businesses use Internet banking to do their business banking. And large businesses almost totally use an on-line solution from ANZ for their banking.

Interviewer

So most of them do?

M16

Yeah, nearly all large businesses will have direct access in to our systems. Now we provide tailored solutions. So we actually have a personal Internet banking solution. Se have a small business Internet banking solution, it has different functionality, only for small businesses. And we have a corporate Internet banking solution which we actually just call ANZ on-line, and it just enables corporate customers to get straight access into their banking accounts, and they use it extremely high, usage is extremely high.

Interviewer

So do you believe that younger people have got most of the access, such as the Internet connections at home, work, and cafes?

M16

Yeah, the younger people are more likely to have on-line access either at home or at work, or through a café or whatever.

Interviewer

How about remembering how to perform tasks?

M16

We put a fair amount of effort; I could actually bundle all of these into one group, rather than answer them sort of individually. We put a fair amount of effort into the useability of the Internet banking solution. And whenever we make changes, make significant changes we get customers in, we run trials and tests. A lot of effort goes in to this whole thing about understanding what to do, how to do it, the layout, the text, the graphics, how to do transactions. There's a lot of work that happens to make that as easy to use as possible and in general, we believe it's pretty good. We don't get a lot of problems with customers ringing up saying I can't figure out how to do this or how to do that.

Interviewer

But do you believe that the customer, they can remember how perform tasks?

M16

Yes. Given the volume of people that are using Internet banking every day, at any given time we'd have 5,000 to 10,000 on-line, at any given time. So right now there's probably 5,000 or 10,000

people on Internet banking. Now there's very very few of those that will ever be contacting our support lines to say how do I do something, very few.

Interviewer

Why do you think that it is easy to remember how to perform tasks?

M16

Because we try and make it as simple as possible, I guess. It's in language that they can use and understand. You know, we try not to use jargon; we're trying to use terminology that they can relate to. You know there's things like look at my accounts, pay my bills, you know its all words that they can relate to and its very clearly laid out on the screen.

Interviewer

How about easy interactions?

M16

Yeah, the same. I think it's important to us and we put effort into making sure that they can have an easy interaction. The same with the next one, easy to use.

Interviewer

Why do you think interactions are easy?

M16

Because we measure. Literally we measure it. We do a lot of user; all of those issues are covered by what we call usability testing. So we design what we want, we bring people in, we film them, we record what they do, we want their finger, mouse, everything. They absolutely understand that it is easy to use. So I think it's easy to use because we put the effort in and we get the feed back to tell us that it is. Alright.

Interviewer

Yeah. Do you think that language and terminology has anything to do with the interaction?

M16

Yes, absolutely. Again, that's all part of the feed back that we get. So if they don't understand something, we ask them why and how can we improve it, and we've done that over time.

Interviewer

How easy to use Internet banking systems?

M16

Yes. I mean that's the same as what I've just said. We believe they're easy to use.

Interviewer

Can you elaborate on that?

M16

I'm not sure what else I can say. We've put the effort in to making it easy to use, we measure that it is easy to use; we monitor feed back that comes through. So for example, if there's a lot of feed back coming through our support lines; if someone has got a problem on Internet banking there's a phone number they can ring, alright. Now if we get an excessive amount of feed back then we react to it, right. So I believe they're all easy to use.

Interviewer

How about customer having greater control/management of their financial transactions?

M16

That's true, yes.

Interviewer

In what way?

M16

Instead of having to wait until the end of the month to get a statement, they are looking multiple times today. We have customers that will contact us 2 and 3 times, they will log onto Internet banking 2 or 3 times a day. They're looking to see what's going, with credit cards they can instantly see what charges are coming through their credit cards. They've got far greater personal control over what's going on. Less of a risk of being overdrawn for example, because they instantly know their balance, they know what's come in. ...end of side 'a'...

Interviewer

Learning to operate Internet banking system is easy?

M16

Again, it's an age thing; it's depending on their age.

Interviewer

Yes?

M16

But it's probably moderately easy, right. For someone whose never done it before, they have some fears. They have fears that they'll lose their money, they have fears that they'll do something wrong and that's more the issue I think, than the ease of use, it's actually fears about what they might do wrong. You know, pay the bill wrong or transfer the money to a wrong account or stuff like that, and it gets lost.

Interviewer

How strongly do you support your beliefs?

M16

Pretty strongly.

Interviewer

Pretty strongly?

M16

Yeah, pretty strongly.

Interviewer

Yes. Beliefs about enhancing customer relationship. Do you believe that the Internet could enhance customer's trust?

M16

No. That's an interesting one. The trust, I don't know. No, I'm not certain that it really would

enhance customers trust. That's a constant battle.

Interviewer

Yes

M16

The fear and the security issues are quite real. There's always a lot of stuff in the press. The fear is much higher than the actual fraud that happens, but the fear is quite real. I would say that it actually lessens the trust because it's another avenue where customers might think their money could go missing. Loyalty is an interesting one, whether it enhances loyalty.

Interviewer

Well how about customer loyalty?

M16

I'm not sure that it does. But where I'm coming from is that it becomes a bit of an expectation these days. Like all banks have Internet banking solutions and it's potentially a view that if they move banks they would just use the other banks Internet banking solution.

Interviewer

Yes

M16

I think it was a different issue 3 years ago. The NAB particularly lagged the other Australian banks in the quality of their Internet banking solution, but they've sort of caught up in the last year or so. So roughly all banks can now provide a similar Internet banking solution. So I'm not sure that it does, it's not a distinguishing feature anymore. We'd like it to be but we can all roughly do similar things on each others Internet banking solutions. So I don't know that it reduces the risk of switching banks. What tends to reduce the risk of switching banks is actually just to have a depth of products.

Interviewer

Yes?

M16

Internet banking itself doesn't do that. Okay.

Interviewer

So are you talking about the quality of the relationship?

M16

Yeah, I'm talking about the last one

Interviewer

Yeah

M16

Internet banking on its own, I don't think enhances the relationship that much, right.

Interviewer

Yeah

M16

Because it becomes just an expected thing that they can do. It's not differentiating a huge amount.

Interviewer

So you don't think that the customer would switch banks because another bank has;

M16

A better Internet banking solution?

Interviewer

Yes

M16

No not on its own. No, I don't think so. As I said, maybe some years ago, maybe only 2 or 3 years ago but not now, because they're very similar.

Interviewer

How about reducing the conflict?

M16

No.

Interviewer

How strongly do you support your beliefs?

M16

Pretty strongly

Interviewer

Pretty strongly?

M16

Yeah, pretty strongly.

Interviewer

Well, is agood idea to adopt the Internet?

M16

Yes

Interviewer

In what way?

M16

It can just improve the overall level of service to our customers. It provides a stronger level of service to the customer. It can lower our own costs. So I think it's a good idea.

Interviewer

How strongly do you feel this way?

M16

Very strongly.

Interviewer

Have you already adopted the Internet?

M16

Yeah

Interviewer

Was this a few years back?

M16

Probably about 5 years ago. I didn't work here then, so I wasn't part of that decision to adopt it. I'm not sure what the key drivers where at the time but it was done. I think it was seen as more of the necessary thing to do. So we're certainly the 6, actually adopted Internet banking.

Interviewer

Why do you think that the bank has taken that decision?

M16

Look, I'm not sure that they had a choice. I think it was a case of competitive pressure probably.

Interviewer

How strongly do you support your decision; this decision?

M16

Probably not too strong, because I really just wasn't part of the decision process. It's a guess.

Interviewer

Do you support that decision?

M16

Oh yes. I mean that literally was a no choice decision, and in my view there's no bank today that would survive without having a strong Internet banking solution.

Interviewer

So, in other words you support this decision very strongly?

M16

Yes.

Interviewer

Thank you

...end of recorded interview...

[Interview completed at 11 a.m. on 22nd August 2003].

NODE CODING REPORT

Node: /Managers' perceptions/Relative advantage/Convenience of service

Treenode address: (5 8 1)
Created: 9/7/03 - 12:04:07 PM
Modified: 12/1/04 - 9:34:15 PM
Document: M16
Passage 1 of 1 Section 1, Paras 4 to 52, 3370 chars.

4: **M16**

5: So what am actually saying is, is customer's behaviour is actually changing. So before Internet banking customers might seek information about their bank account on a relatively infrequent basis. That is that they would ring up IVR or they'd go into a branch or they'd go to a ATM and they'd get a balance, or they'd want to know whether their salary had been deposited, or they'd want to know whether a certain amount had come out, and they might do that once a week. What we now find is that we have a very large proportion of our customers that access their account information daily and sometimes multiple times per day. So there's a significant change in what the customer is actually doing. We've given them a tool to get access to a lot more information about their actual account and transactions, and they're actually using it significantly and regularly. That's quite a difference.

6:

7: **Interviewer**

8: So in that sense do you believe that the bank could offer convenient services to customers?

9:

10: **M16**

11: Through Internet banking, absolutely yes.

12:

13: **Interviewer**

14: Can you just give me an example of that?

15:

16: **M16**

17: Type of service?

18:

19: **Interviewer**

20: Yes

21:

22: **M16**

23: Well bill payment and what we're now finding;

24: **Interviewer**

25: Is that because of convenience?

26:

27: **M16**

28: Yes, because they now can get; have you heard of B-Pay View, do you know about it?

29:

30: **Interviewer**

31: Yes

32:

33: **M16**

34: There's a good example where they can get an email to say that their water bill is due. They can go into Internet banking and they can view the bill and they can pay the bill. They can do the whole lot seamlessly, quickly and it's all on-line. So that's something that just never existed before. And what that is, in terms of convenience its transferring money between accounts and between banks is something that's done more frequently now. So they use; do you know what Pay Anyone facilities are?

35:

36: **Interviewer**

37: No

38:

39: **M16**

40: In ANZ terminology, we have a facility called pay anyone. What that means is, I can go in and I can transfer money to basically any bank account, and I simply key into Internet banking the BSB of the bank, the account number, the amount, reference information and it just does the transfer. It's just called pay anyone.

41:

42: **Interviewer**

43: So from one persons account to another persons account;

44:

45: **M16**

46: Say I needed to give you or send you $500. I can just go on to Internet banking right now, and you told me your bank account details and I can just push that money to you and that would be in your account tomorrow. So normally, previously that would have to be write a cheque, post it, or use it as cash. People buying on-line for example; as an example of myself, I just purchased some material on e-bay, okay. I spoke to the person I was buying them goods from, it was an auction, and I just transferred the money straight to his account, I did that through Internet banking. That convenience just didn't exist. So there's an example. We're seeing a lot of growth in that sort of pay anyone bill payment type facilities, they're growing quite rapidly.

47:

48: **Interviewer**

49: And how about the convenience of doing the service at home or office?

50:

51: **M16**

52: Yes. Being able to do it anywhere, at home, office. I rarely go to a branch myself and even more rarely do I write a cheque now. I almost never do it; I might write one cheque a year. So that convenience of; and I do nearly all of my banking through Internet banking.

53:

Sample of Output of Results (Enablers/Inhibitors in the Omani banking industry within RA category).

Scope Items	(1 89 1 10 1 15) Convenince of location	(1 89 1 10 1 14) Convenience of available service-Pos	Totals	Percent
M1	1	1	2	100.00
M10	1		1	50.00
M11	1		1	50.00
M12			0	0.00
M13		1	1	50.00
M14	1	1	2	100.00
M15	1	1	2	100.00
M2	1		1	50.00
M3	1	1	2	100.00
M4	1	1	2	100.00
M5	1	1	2	100.00
M6	1	1	2	100.00
M7	1	1	2	100.00
M8	1	1	2	100.00
M9	1		1	50.00
Totals	13	10	23	
Percent	86.67	66.67		

Scope Items	(1 89 1 11 1 14) Security-Negative	Totals	Percent
M1		0	0.00
M10		0	0.00
M11		0	0.00
M12	1	1	100.00
M13		0	0.00
M14		0	0.00
M15		0	0.00
M2		0	0.00
M3		0	0.00
M4		0	0.00
M5		0	0.00
M6		0	0.00
M7		0	0.00
M8		0	0.00
M9		0	0.00
Totals	1	1	
Percent	6.67		