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# Inhibitors and Enablers to Internet Banking in Oman - A Comparison with Banks in Australia

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*To fully benefit from moving to new national economies an up-to-date banking industry is important, but Omani banks continue to conduct most of their banking transactions using traditional methods. This paper reports on research to investigate inhibitors and enablers of Internet banking in Oman, comparing this to the situation in Australia. Data was collected from interviews with bank managers in each country, based on a consideration of each bank manager's perceptions of four factors that might affect their decisions to adopt, or not adopt Internet technologies: Relative Advantage, Organisational Performance, Customer/ Organisational Relationship and Ease of Use. It is hoped that the results will be useful in seeing why Omani banks have been slow to adopt Internet technology and to encourage them to make the change.*

Field of Research: Electronic banking

## 1. Introduction

In the past Oman has been heavily reliant on oil as its main source of income, but during the 1990s it began to diversify its income sources (Al-Hajri 2005). To get the most out of this new economy however, an up-to-date banking industry is necessary. Internet technology infrastructure in Oman has grown steadily over the years but so far has only had a moderate effect on the Omani economy, and the Omani banking industry has been very slow and cautious in moving from traditional distribution channel banking services to electronic banking (Al-Hajri 2005).This paper describes a study to determine the major inhibitors and enablers to the adoption of Internet technology in the banking industry in Oman. The study informed the Oman experience by examining the more mature Australian experience.

## 1. Literature Review

In examining usage of financial distribution channels in the Australian financial industry Thornton and White (2001) found that since deregulation in 1983, most financial institutions have rethought their strategies to take full advantage of Internet technology. Tan and Teo (2000) suggest that banks that fail to respond to Internet banking are likely to lose customers and that the cost of offering Internet banking services is often less than the cost of keeping branch banking.

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They note that challenges to expand and maintain banking market share have convinced many banks to invest more in the Internet and to rethink their IT strategies in competitive markets. This notion was also confirmed in a study conducted by Jasimuddin (2004) who examined the role of Internet banking in Saudi Arabia and indicated that the majority of Saudi banks had taken advantage of Internet technology to establish web sites but that few went on to offer Internet banking services.

In spite of the worldwide acceptance of Internet technology, however, banks in Oman are yet to make significant use of this technology. This reluctance suggests that managers perceive the costs of Internet technology adoption as outweighing the benefits. This can potentially be explained by fear of the consequences of failure in the case of high investment projects (Cule, Schmidt, Lyytinen and Keil 2000; Butterfield and Pendegraft 2001) as well as by perceived customer dissatisfaction.

The literature suggests a number of factors that could lead to, or act to inhibit adoption of information technology (IT). To begin, IT diffusion literature (Tornatzky and Klein 1982; Moore and Benbasat 1991; Rogers 1995) highlights the importance of perceptions of *relative advantage* in determining the adoption of new technologies. Rogers (1995) suggests that the rate of adoption of a new innovation is related to (perceived) relative advantage: the greater the perceived relative advantage, the faster the adoption. Next, the desire to improve *organisational performance* is seen to be an enabler for technological change. If Internet technology could be used to improve its performance, a bank would be able to gain advantage in a competitive environment, and many authors (Kettinger, Grover, Guha and Segars 1994; La and Kandampully 2002; Soliman and Janz 2004) argue that IT has the potential to achieve this. Any chance to improve the *relationship with customers* is also pointed to by researchers (Julian and Ramaseshan 1994 :29; McKenzie 2001) as a reason for business to adopt new technologies. An important question, however, is how a bank could enhance its customer relationships through Internet technology adoption and the literature suggests that this should be considered in relation to customer trust, commitment and satisfaction. Jabnoun and Al-Tamimi (2003) examined perceived services quality in commercial banks in the United Arab Emirates, emphasizing the importance of service quality to maintain market share, concluding that customers value human skills the most in service quality. Finally, the importance of *ease of use* in determining successful IT adoption has been highlighted in much previous literature (Davis, Bagozzi and Warshaw 1989; Moore and Benbasat 1991; Taylor and Todd 1995). An examination of these factors then became the basis of this research project as shall be elaborated below.

## 2. Methodology

In deriving a framework for this study four existing research frameworks were considered: the Theory of Reasoned Action (Fishbein and Ajzen 1975; Ajzen and Fishbein 1980), the Theory of Planned Behaviour (Ajzen 1991), the Technology Acceptance Model (Davis 1986; Davis 1989; Davis, Bagozzi et al. 1989) and Diffusion of Innovations (Rogers 1995). These models, and the literature, suggested that bank manager's perceptions of four adoption factors would affect their decisions to adopt, or not adopt Internet technologies:

1. Perceived Relative Advantage
2. Organisational Performance
3. Customer/Organisational Relationship
4. Ease of Use

These four constructs then formed the basis of the research which involved interviews with twenty seven strategic, tactical and operational managers at each of nine major banks: five in Oman and four in Australia. The Australian banking industry was considered in this investigation as by comparing Internet technology adoption in the banking industry of a developing and a developed country the study hoped to provide a richer understanding of the industry and how to improve Internet technology adoption in the banking industry in Oman. The data was gathered through semi-structured interviews based on issues identified from the literature and from the theoretical framework. Analysis of the interview data identified major patterns of Internet technology adoption. Data was then reduced through a process of generating categories and establishing links as suggested by Strauss and Corbin (1990) using a grounded theory approach where a code is attached to a segment of text and then links between the coded data are explored. Thematic conceptual tables were drawn up to compare issues within a case and across cases and to identify patterns to facilitate understanding. The study found that bank managers' perceptions of these four basic constructs provided a good understanding of Internet technology adoption in the banking industry.

## 3. Findings and Discussion

The *Perceived Relative Advantage* construct relates to the degree to which bank managers think that Internet technology might help their bank gain advantages in the industry. From the literature three major issues emerged relating to the perception of relative advantage: *convenience of services*, *innovative use of IT* and *management of banking services*. Most respondents from the banking industries of both Oman and Australia expected that Internet technology *could* enable them to offer more convenient services to their customers. 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*

Convenience of location was also emphasised by most respondents from both banking industries. One respondent 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.*

In other issues, respondents raised concerns on rapid development of ideas, culture, customisation of services, Internet security and online marketing. Both banking industries took the view that rapid development of innovative ideas could be achieved through Internet technology adoption. In reply to the question of management of services respondents noted that it was easy to follow up requests and complaints, but raised concerns on Internet security, awareness/knowledge about Internet technology, consistent quality service, business process re-engineering and convenience of available service.

The second construct: *Perceived Organisational Performance* is associated with how much a bank manager thinks Internet technology could improve their organisational performance. Three issues: *profitability*; *market environment* and *employee productivity* were utilised to explore this construct in depth. In relation to profitability, participants raised several issues: reduction of communication costs, high technology investment cost and the need for economies of scale for Internet use. The majority of respondents in the Australian banking industry believed that they could reduce communication costs.

> *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.*

The majority of respondents from the Omani banking industry indicated that two impediments: high technology investment cost and the need for economies of scale for Internet technology use are inhibiting the rate of Internet technology adoption in the Oman.

> *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.*

The third construct: *Perceived Customer/Organisational Relationship* relates to how a bank manager perceives Internet technology adoption in terms of improving the relationship with their customers. In the literature, three major issues emerge related to the perception of customer/organisational relationship: *customer trust*, *customer commitment*, and *customer satisfaction*.

Most respondents were concerned about the problem of Internet security as bank customers cannot put their full trust in Internet technology due to possible fraud and privacy violation problems. Both banking industries recognised the difficulty of solving this problem but believed that Internet security management is possible through continuous surveillance and maintenance of their database.

> *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 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.*

Unlike Australia, the Omani banking industry saw the Internet as an obstacle to customer loyalty because they believed that people could do better than machines and it seems that the Omani banking industry is mostly relying on human capital to deliver their banking services.

The final construct: *Perceived Ease of Use* measures how easy bank manager believes that Internet technology is to use. The literature suggests that if technology is perceived to be easy to use then the rate of adoption will increase. The research threw up three major issues related to perceived ease of use: *easy to navigate*, *easy to learn* and *easy to manage*. The difficulty of navigating on the Internet was highlighted by Omani bank managers, one of whom 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 parts of the world because they are well ahead of us. 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. Anything 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.*

This difficulty then acts to slow down the process of adoption. Participants raised several concerns about how easy it is to learn Internet technology including fear of new technology, web-site design and user friendliness, but most respondents agreed that Internet technology was easy to learn. The last issue related to management of financial transactions on the Internet. Respondents from the Australian banking industry found this easy, and surprisingly, none of the respondents from the Omani

banking industry raised any major concerns on this issue, possibly due to a lack of Internet experience.

In summary, the enabling and inhibiting factors to adoption of Internet technology in Omani and Australian banks are shown in Tables 1 and 2 below:

| Omani banking industry | Enablers | Inhibitors |
|---|---|---|
| **Perceived Relative Advantage** | - Convenience of service (convenience of available service and convenience of location)<br>- Innovation of ideas (rapid development of innovative ideas)<br>- Management of services (easy to follow up requests/complaints) | - none |
| **Perceived Organisational Performance** | - Productivity of employees (business efficiency) | - Profitability (high technology investment cost and the need for economies of scale for Internet technology use) |
| **Perceived Customer/ Organisational Relationship** | - Customers' satisfaction (reduce conflict) | - Customer trust (Internet security)<br>- Customer commitment (customer loyalty) |
| **Perceived Ease of Use** | - Easy to learn (increased automation of process) | - Ease of navigation (lack of awareness/ knowledge about Internet technology and accessibility of service) |

**Table 1**: Inhibitors and Enablers of Internet Banking in Oman

By comparison, results for the Australian banking industry were:

| Australian banks | Enablers | Inhibitors |
|---|---|---|
| **Perceived Relative Advantage** | - Convenience of service (convenience of available service and convenience of location)<br>- Innovation of ideas (rapid development of innovative ideas)<br>- Management of services (easy to follow up requests/complaints) | - none |
| **Perceived Organisational Performance** | - Profitability (reduction of communication cost)<br>- Productivity of employees (business efficiency) | - Market environment (customer base expansion) |
| **Perceived Customer/ Organisational Relationship** | - Customer commitment (customer loyalty)<br>- Customer satisfaction (reduce conflict) | - Customer trust (Internet security) |
| **Perceived Ease of Use** | - Easy to navigate (user friendly and accessibility of service)<br>- Easy to learn (awareness/ knowledge about Internet technology)<br>- Easy to manage (customisation of banking services and online tracking of banking/financial services) | - none |

**Table 2**: Inhibitors and Enablers of Internet Banking in Australia

## 4. Conclusion

This study explores what were the enablers and inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry.

From an analysis of 27 semi-structured interviews, the findings reported in this study suggested that four perceptions of bank managers towards the Internet: *perceived relative advantage*, *organisational performance*, *customer/organisational relationship* and *ease of use* can assist in drawing out enablers and inhibitors to the adoption of Internet technology for both Oman and Australia.

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