FACTORS AFFECTING BANK STAFF ATTITUDE TOWARDS E-BANKING ADOPTION IN LIBYA

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ABSTRACT
E-banking technology is gaining widespread adoption in the banking industry across developed countries. The case, however, is different in less developed nations, such as Libya. Libyan banks, for example, despite recently acknowledging the benefits of e-banking technology in improving banking services, have not adopted and integrated this innovation within its banking delivery strategy. Instead, they continue to deliver most of their banking services and products using traditional banking delivery channels, notably paper-based branch networks. This is largely due to bank staff resistance to new banking technologies. A review of literature on ICT adoption shows that there has only been a few studies about ICT adoption in developing countries compared to the developed world, and even less so about the Middle East, including Libya. Thus, this paper aims to bridge this gap by investigating the key factors affecting bank staff’s attitude towards e-banking technology, a step necessary to understand what makes effective the introduction of e-banking projects in Libya. This paper draws on existing literature on technological developments in the banking industry and the findings from semi-structured interviews with key bank staff of a leading commercial bank in Libya. A number of factors of e-banking technology adoption are identified that affect adoption. Finally, we identified lessons that can guide future e-banking implementation projects in Libyan banks. Lessons can be taken for other Arab countries.

Keywords: E-banking, technology adoption, adoption factors, Libyan Banking Industry

1. INTRODUCTION
The use of electronic banking technologies (e-banking) such as Automated Teller Machines (ATMs), Tele-banking, home banking and internet banking, in the delivery of banking products and services has increasingly become an essential aspect of contemporary banking systems (Mols, 1998), because banking services are informational (Bradley and Stewart, 2002) and can be easily automated and digitized (Porter and Millar, 1985). Most banks consider the adoption of e-banking technology as a means to improve efficiency and performance, and service quality (Robinson, 2000).

The term e-banking is relatively new (Moenaert and Lievens, 2000), and several definitions have been cited in the literature. Nevertheless, the majority of banking technology researchers and practitioners (e.g., Daniel, 1999; Keyes, 1999; Pikkarainen et al., 2006; Nikola et al., 2002; Lassar et al., 2005) agree that the concept of e-banking refers to the system that enables banks to offer their customers access to their accounts to transact business and obtain information via electronic communication channels; these channels can include Automated Teller Machines (ATMs), tele-banking, home banking and internet banking (Turban, 1999).
The desirability of e-banking is well documented. According to Nehmzow (1997), traditional banking methods (e.g., back office processes such as paper filling, paperwork processing, sorting cheques and cash handling), from both the bank and customers’ perspective, has become the most costly way to bank. The complex requests of bank customers, such as bill payments, cash withdrawals, loan applications and cheque clearings were a huge task for traditional banks, thus, there was a clear need to adopt technology to automate back office duties (Keyes, 1999). According to Robinson (2000), the use of computer systems in the banking industry enable banks to transfer, record and store financial information inexpensively, thus the overall result will help to drive a reduction in banking costs (Cooper and Zmud, 1990). Jaruwachirathanakul and Fink (2005), argue that the fundamental reasons for the adoption of e-banking are transactions-processing cost and time savings.

Despite banks in Arabic countries having recently acknowledged the benefits of e-banking technology in improving productivity and efficiency, some banks (i.e., Libya) have struggled to adopt and integrate e-banking within its existing banking system (Khalfan and Akbar, 2006). This is largely due to bank staff’s resistance to new technologies (Khalfan and Alshawaf, 2004).

2. BANK STAFF ATTITUDE AND TECHNOLOGY ADOPTION

Bank staff perception of and expectations towards banking technologies are a crucial element in the development of successful e-banking implementation projects (Lymperopoulos and Chaniotakis, 2004). If bank staff primarily consider e-banking as a self-service and convenient channel that decrease costs and if its adoption will not affect their positions, then they will adopt it (Nath et al., 2001). However, if they perceive e-banking as a threat to their job prospects and a way to lose customers, then they will be likely to resist its adoption to keep customers in the branches and their jobs (Mols, 2001). Bank staff resistance to technology adoption is a common problem in the banking sector (Chan and Lu, 2004; Constantine and Chaniotakis, 2005). Davis et al. (1989) argue that the introduction of new technology is bound to cause a disturbance within organizations and to individuals within those organizations as older technologies and systems are displaced by new ones. Davis et al. (1989) also state that the successful implementation/adoption of any new technology are principally determined by organizational users’ attitudes: employees and managers build up an attitude and feeling about the new technology, and that feeling could direct them to the adoption or rejection of the proposed technology. Attitude can be a very powerful enabler or a barrier towards the adoption of the new technology. Ajzen and Fishbein (1980) defines the term ‘attitude’ as a complex conundrum of feelings, desires and fears that create a state of readiness to act within a person.

Understanding users’ attitude towards the adoption of new technologies has proved to be one of the most challenging issues in technology adoption literature (Tan and Teo, 2000). Early technology adoption and diffusion literature (see Rogers, 1983; Davis, 1985; Davis et al., 1989; Ajzen, 1985; Moore and Benbasat, 1991; Sathye, 1999; Tan and Teo, 2000; Karjaluoto et al., 2002) argues that user attitude is the key determinant of technology adoption. However, factors such as innovation characteristics (e.g. perceived usefulness and ease of use, compatibility, reliability, security), organisational and managerial characteristics (e.g., leadership characteristics, fear of loss of autonomy, fear of security breach), and facilitating conditions (e.g. availability of government support and availability of top management support) have been found as the key influential factors affecting users’ attitude towards adopting the proposed technological system. Liao et al. (1999) argue that targeted users may reject the new technologies for several reasons. Absence of user involvement, lack of an understanding, technical difficulties, lack of training, and insufficient support from top management and perceived complexity, are considered as the main causes of user resistance
(Manross and Rice, 1986; Chen, 1999; Liao et al., 1999). Moreover, users may reject some technologies because technologies are not compatible with their values, beliefs, and past experiences (Fichman and Kemerer, 1999).

However, in reviewing the above literature, it was found that despite the numerous attempts to provide clear understanding of the factors that affect user’s attitude towards the acceptance of new technological innovations, nearly all of these have attracted heavy criticism from researchers for being too simplistic and inadequate in successfully predicting the factors impeding the adoption rate of IT in less developed countries (Danowitz et al., 1995, Abdul-Gader, 1997; Centeno, 2004; Kamel and Hassan, 2003). It was also established that there is little empirical evidence, to date, on identifying the potential factors (inhibitors and drivers) affecting the adoption of ICTs at the organizational level in Arabic countries, especially in Libya.

Therefore, several researchers from Arabic countries (e.g., Aladwani, 2001; Alshawaf, 2001; Al-Sukkar and Hasan, 2004; Khalfan and Alshawaf, 2004; Khalfan and Akbar, 2006) critically argue that current technology adoption theories have been developed in Western countries, and therefore they strongly reflect the attitudes, values and beliefs of those environments. Therefore, it is essential for any country to consider their own factors that motivate or hinder the users’ attitude towards the adoption of technological systems because each country has each own adoption factors (Aladwani, 2001). Thus, the focus of this paper will be on Libyan e-banking initiatives.

3. THE NEED FOR E-BANKING TECHNOLOGY IN THE LIBYAN BANKING INDUSTRY

The Libyan banking industry is under increasing pressure to improve its banking services. The increasing demand from the international banking community is placing significant pressure on Libyan banks to be electronically ready (Libyan investment, 2007). Moreover, the large distance between Libyan banks has also created a pressure for connecting the headquarters with their branches electronically, rather than handling cash and paper manually (CBL, 2007). Amongst the Arab nations, Libya has a reputation for having the finest bankers but the worst banking services (Libyan investment, 2007). E-banking technology has not yet found its way to Libyan banking sector (Libyan News and Views, 2007). Basic electronic banking facilities, such as automated teller machines (ATMs) and telephone banking are limited in Libya and more interestingly, Libyan banks are still relying on manual banking methods to undertake their daily banking activities (Libyan News and Views, 2007). Therefore, the adoption of e-banking facilities is essential for Libya’s economic reform.

4. TECHNOLOGY LEVEL IN THE LIBYAN BANKING INDUSTRY

Despite the rapid development of Libyan IT and telecommunications, the adoption of technology in the Libyan banking industry in general is limited (Libyan News and Views, 2007). The Libyan banking industry has been utilizing information technologies mainly at the branches for accounting practices or operating procedures, including interest calculations and balancing of books (CBL, 2007). Thus, ICTs are primarily used in Libyan banks for basic internal operational and clerical purposes (e.g., typing, sorting customer files and processing paperwork in the back office) and to facilitate work processes and to manage documents that cannot be done manually.

Libyan banks have not yet adopted modern banking ICTs (e.g. internet access, core banking solutions and e-banking related software) (CBL, 2007). This explains the lack of ebanking facilities in Libya. The majority of banks still operate through their branches alone. This means that customers can only largely undertake business on particular branch–
information is not exchanged between branches; and all transactions can only be performed during bank opening hours meaning customers have to wait in long queues.

To establish the foundations for e-banking, the Central Bank of Libya (CBL) in cooperation with the government (Ministry of Economy and Trade), recently launched an ambitious programme, the National Payment System (NPS) (CBL, 2008), aimed at promoting e-banking technology in its leading commercial bank with the largest branch network in the country. The bank was established in 1970 to take over the commercial operations of the Central Bank of Libya (CBL).

The NPS aims to integrate advanced ICT tools such as core banking servers, local area networks, and the Internet access in Libyan banks in a way that qualify them to deliver efficient banking services. This project is being implemented in two stages: 1) headquarters; 2) branches (CBL, 2007).

These technologies provide the basis for the implementation of e-banking such as Internet banking, telephone banking, electronic fund transfer and ATMs (CBL, 2007). The project was expected to be completed in mid-2007. However the government is still struggling to fully implement the project (Libyan News and Views, 2007). According to official reports (e.g., Libyan Economic Forum, 2008; Libyan News and Views, 2008), bank managers and employees of the bank have been delaying and resisting the implementation of the project due to factors such as the lack of uncertainty, risk of being redundant as result of the automation of bank’s delivery strategy and changes of the current roles (Libyan News and Views, 2007). However, there is yet no clear understanding and empirical evidence of the factors affecting bank staff’s attitude towards the adoption of e-banking project in Libya (Libyan Economic Forum, 2008). Thus there is a need to determine what factors are affecting bank staff’s attitudes towards e-banking implementation.

Therefore the aim of this paper is:

1. To identify the potential factors that hinder the e-banking project from being implemented;
2. To recommend strategies that ensures efficiency, effectiveness and safety for the developments of e-banking system.

5. **Research Methodology**

Since the aim of this paper is to explore the factors that influence bank staff attitude towards the adoption of e-banking systems in Libyan banks, qualitative data through semi-structured interviews was gathered. Semi-structured interviews are thought to be the best method for qualitative data collection as it involves an interaction between the interviewer and the interviewee for which the purpose is to obtain valid information.

The target of the study is a leading commercial bank in Libya. It was chosen because it is the only Libyan bank that has embarked on a project to introduce e-banking technology in its main branches. Data will be gathered from a representative sample of its employees, IT department managers, and other relevant senior management in the chosen bank. Given the fact that the e-banking project is in its early stages, it was considered adequate to interview only those personnel who would be able to make a meaningful contribution, and consequently eight key bank staff from the chosen bank have been targeted for interviews. They represent different levels of the bank hierarchy: the bank’s Chief Executive (P1), the bank’s Deputy Managing Director (P2), the bank’s IT managing director (P3) one IT middle manager (P4) and four bank clerks (P5, P6, P7 and P8). Due to issues of confidentiality and anonymity of the research, it has been decided not to name the interviewees in this study. Instead a code has been set for each interviewee such as P1, P2 and P3 instead of using their names. These levels of
management are chosen because they are either the decision-makers in their banks, or prospective e-banking users who need e-banking technology to perform their tasks and thus are aware of the importance of such system.

6. **INTERVIEW FINDINGS**

In an attempt to explore enablers and inhibitors of e-banking technology adoption, key banking staff of a leading commercial bank in Libya were asked what factors that impact their attitude and willingness towards the implementation of e-banking strategy in their bank. When exploring the opinions and perceptions of the interview participants, all interviewees, without exception, were in strong agreement with the key factors found in the existing technology adoption frameworks (see Table 1). The study reinforced that bank managers’ perceptions of two basic concepts provide a broader understanding of e-banking adoption in the banking industry than that of previous theories and models including the Theory of Reasoned Action, the Theory of Planned Behaviour, the Technology Acceptance Model and the theory of Innovation Diffusion. These are: perceived technological features such as ease of use and usefulness, compatibility, complexity and perceived risk and security; and perceived managerial and organizational issues such as organizational change, top management support and IT funds.

The findings, on one hand, show that there are many negative influences within the Libyan banking system that act as obstacles to the adoption of e-banking, but on the other hand, they indicate that not all of these were considered to have the same degree of severity, and some were seen as more fundamental than others.

Interestingly, the disparity in the importance and seriousness of these factors are due to some distinct variation between the perceptions of staff from different levels of the hierarchy, in particular between managerial level staff who were mainly at the planning and supervision end of the spectrum, and the clerks who were essentially on the front line, and responsible for IT implementation. Hence, a division could be seen between those who were committed to the introduction of e-banking technologies for a more efficient operation, but nonetheless did not have to use it, and those who could see the logic of introducing the technology but were then expected to implement it. The following subsection represents the findings of the interviewees’ perception with regard to the key factors enabling or hindering the adoption of e-banking.

6.1 **Managerial and Organizational Factors**

6.1.1 **Resistance to Change**

A high number of participants viewed the change from legacy banking to electronic banking as a threat. For instance, all bank clerks (P5, P6, P7 and P8) expressed anxiety over the implementation of e-banking and indicated their perceived inability to cope with the new technological responsibilities. They also expressed fear of job losses, fear of losing autonomy and control, fear of uncertainty, and fear of failure and perceived risks. They clearly gave the impression that the proposed change was a senior bank management initiative that may not have been properly thought through. Therefore, they felt that they might be responsible for any potential failure of e-banking projects. Interestingly, all interviewees at the clerk level were aware of the benefits of technology in certain contexts, but, at the same time, they expressed caution about its suitability for Libya. This assumption that the Libyan environment was different, suggests that the whole context might be resistant to change.
### Table 1: A Summary of Key Factors Affecting Bank Staff Attitudes towards E-banking in a Leading Libyan Bank

<table>
<thead>
<tr>
<th>Categories from literature</th>
<th>Factors identified from the interviews</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Change</td>
<td>Fear of new responsibilities.</td>
<td>The overwhelming majority of interviewees reported resistance to e-banking project due to new responsibilities that are associated with it.</td>
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<td></td>
<td>Fear of uncertainty and job losses.</td>
<td>All bank staff expressed anxiety over the implementation of e-banking project and viewed this kind of change as a threat to their future jobs.</td>
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<td></td>
<td>Fear of losing autonomy and control.</td>
<td>The majority of interviewees from management level expressed their worries over possible vigilance of daily banking operations with the use of e-banking systems.</td>
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<tr>
<td></td>
<td>Fear of losing customer relationship</td>
<td>All interviewees from all level expressed worries regarding their future of customer relationships. They argue that the benefits of face of face interaction with their customers will be lost as result of e-banking implementation.</td>
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<tr>
<td>Management support</td>
<td>Lack of effective leadership.</td>
<td>All interviewees from the IT department indicated that lack of effective leadership were a key barrier to e-banking project implementation.</td>
</tr>
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<td></td>
<td>Lack of training</td>
<td>The majority of interviewees said that shortage of training opportunities was the main barrier and this is consistent with literature. The shortage of training opportunities is a barrier to IT innovation.</td>
</tr>
<tr>
<td></td>
<td>Lack of strategic IT plan.</td>
<td>The majority of interviewees from management level admitted that there was a lack of strategic IT planning was and believed it to be a hindrance to e-banking implementation.</td>
</tr>
<tr>
<td>IT knowledge and awareness</td>
<td>Lack of appropriate technical knowledge amongst bank staff.</td>
<td>A large number of participants with poor IT backgrounds showed a negative attitude towards e-banking project. For instances, senior managers lack confidence in the IT solutions available to them. This is, according to the literature a barrier to e-banking adoption</td>
</tr>
<tr>
<td></td>
<td>IT terminology</td>
<td>All Interviewees indicated that lack of understanding of IT terminology makes ebanking adoption problematic for them, but most IT interviewees agreed that ebanking software are easy to learn.</td>
</tr>
<tr>
<td>Technical Theme</td>
<td>Availability of IT funds.</td>
<td>All participants pointed out that Libyan banks had the financial capability to adopt e-banking systems. According to the literature, this should lead to increased innovativeness.</td>
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<tr>
<td>Telecommunication infrastructure</td>
<td>Poor IT infrastructure.</td>
<td>All interviewees identified that a lack of appropriate IT infrastructure is the main technical constraint preventing e-banking implementation in Libya. According to the literature, this acts as a barrier to IT adoption.</td>
</tr>
<tr>
<td>IT Key resources</td>
<td>Lack of national IT expertise.</td>
<td>The majority of interviewees identified IT expertise as one of the biggest obstacles to the adoption and diffusion of e-banking technologies in Libya.</td>
</tr>
<tr>
<td>Security and privacy</td>
<td>Fear of transaction error and Fraudulent activities.</td>
<td>All interviewees expressed great anxieties about security issues such as potential fraudulent activities and errors in conducting customer transactions.</td>
</tr>
<tr>
<td></td>
<td>Poor security measures.</td>
<td>The majority of interviewees identified that there is no security measures such as elaws and legislation that regulates e-banking activities.</td>
</tr>
<tr>
<td></td>
<td>Confidentiality and privacy.</td>
<td>Security measures expressed by those responsible for IT are not up to the standard required in the banking industry.</td>
</tr>
<tr>
<td>Compatibility</td>
<td>System integration problem.</td>
<td>All IT managers believe that their current banking systems are not compatible with their existing banking systems. They argue that a dramatic change is required to cope with the new technology.</td>
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<tr>
<td>Complexity</td>
<td>System technical difficulties.</td>
<td>All interviewees indicated that e-banking systems are a complex innovation to adopt in many ways.</td>
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</table>
Senior management interviewees (P1, P2) on the other hand, believed that resistance to change from bank clerks was the main barrier to the adoption of e-banking technology in Libya. A clear example of this belief came from one participant P2 (a bank manager) who declared that:

“the majority of our bank tellers are relatively content with the way in which the business is being operated, therefore for that reason they do not particularly want the introduction of any new technology that would change the way in which their daily activities are performed”.

Yet the workforce were of the opinion that this was a result of top management’s own resistance to change, primarily because they too were afraid about whether they would maintain their current status under a computerized system.

Despite the anxieties identified by senior management (resistance to change by clerks), IT management (lack of awareness of technological complexities by top management), and bank clerks (lack of personal competence), all three types of staff were able to appreciate the theoretically-positive features of e-banking, and agreed that it had the potential to offer more convenience to customers. One example of such understanding came from an IT manager (P4) who stated:

“Using the technology is very beneficial for our banking system. It helps our banks to conduct their activities more effectively and efficiently”.

### 6.1.2 Lack of Effective Leadership

This view is mainly received from lower level workers and those responsible for implementation. They suggested that senior management was not properly committed to the e-banking initiative. IT staff believed that their senior managers were not in favour of the use and spread of computerised technology, and consequently did not enforce the use of any technology in the organisation. In this respect, one participant P4 (IT manager) said:

“The senior management can enforce the adoption of e-banking technology if they want, but in fact, they do not want it for personal reasons such as lack of IT knowledge which may in turn affect their future positions and for being observed over the computer by the headquarters”.

In addition, all bank clerks (P5, P6, P7 and P8) expressed concern about the poor levels of support from top management, with P1 saying, that in the absence of more:

“Management support from our senior managers, it will be very difficult to adopt the proposed e-banking technology initiatives.”

However, participants from IT management (P3 and P4) were more convinced that senior management intervention could have a positive influence on the adoption rate of ebanking technology. They argued that support from senior management is the most important factor for e-banking implementation. As one participant (P3) suggested:

“If IT vision is not within the top priorities of senior management, many vital development such as IT trainings and education will be overlooked or postponed.”
6.1.3 Lack of IT Knowledge and Awareness
This was believed by all interviewees to be a key problem. Participants pinpointed a lack of awareness of new technologies, deficiencies in computer use, fear of computers, and the low level of technological education among workforce and senior management. As one participant (P3) from the IT Department mentioned:

“The lack of awareness and understanding of our bank managers and employees about e-banking and its benefits is the main reason why our bank has been struggling to implement the system at the projected time”.

This lack of understanding (especially in relation to IT jargon) was also a concern raised by the bank’s IT staff. Interviewees indicated that ignorance of software language operates as a key barrier to e-banking in many Libyan banks, as noted by P3 (an IT manager) who stated:

“IT Language is a main barrier preventing our bank to adopt e-banking technology.”

Clearly, the lack of know-how and general IT expertise comprises one of the biggest obstacles to the adoption and diffusion of e-banking technologies. The IT management staff, who were had the expertise made a judgement about the bank’s readiness, and were of the opinion that this was not simply a problem with the lower level workforce, but extended to senior management as well.

6.1.4 Lack of a Strategic Plan
This was believed to be a hindrance by some of the interviewees who felt that the Libyan banks had the financial capability to adopt e-banking technology, but there was no firm national strategy, and consequently, there was a knock-on effect which slowed down the technology adoption rate. In this respect, P1 (a senior bank manager) was quoted saying:

“We do not have a national strategic plan for the adoption of technology in general and e-banking in particular because senior officials of the government have not yet realised the value of e-banking technology and it is not seen as a priority of the government yet”.

This was somewhat in contradiction to a comment in relation to another response, when a senior manager (P2) said:

“Our government is supporting the change and adopting the latest technology available in the market and providing the entire basic infrastructure needed for its adoption … our government provides the costs of importing hardware, software, and expertise to promote and encourage the use of e-banking technologies in many banks that cannot afford such costs”.

However, it is clear that the bank is ‘promoting and encouraging’ rather than actually enforcing the introduction of e-banking technologies, and it is obvious from this that any national strategy is still to be properly developed. Indeed, an IT manager (P4) is quoted as saying:
“The banking industry in Libya is definitely looking at e-banking technology as a new, innovative and effective delivery channel improving banking services. However, at the same moment, the road ahead is not, as I see it, very clear for the industry as a whole to make a top decision to go ahead with such a strategy of implementing e-banking services. It looks to me like it takes some time to clear the ambiguities”.

More government direction in the form of a clear national strategy which can then be passed down to the banks for implementation seems to be needed.

6.1.5 Lack of E-laws and Legislation
The unavailability of e-legislation was a main concern for all bank staff. On this theme, a participant P3 (a bank IT Manager) indicated his reservations saying:

“I’m very conservative when it comes to use electronic systems despite my work and knowledge about IT and internet security. The problem is that the system in Libya does not protect me yet, so I have to take care of my own safety.”

Interestingly, further analysis of interviews revealed that bank clerks (especially female ones), as front end users, expressed great concern about the absence of e-laws and legislation for e-banking in particular. As Participant P7 (bank clerk) commented:

“If a financial transaction goes wrong as a result of input mistakes, without legal protection, we will be in a difficult position”.

Accordingly, the study found that even within this small segment of society, the absence e-legislation was seen as the main inhibitor to e-banking improvement in Libya. In this regard, the development of proper e-legislation was perceived as crucial to support the adoption of e-banking, since the absence of this would inevitably inhibit and discourage people and businesses from going online.

6.2 Technological Issues
6.2.1 Unavailability of Proper Telecommunications Infrastructure
This was raised by many interviewees as a crucial problem deterring the advancement of ebanking technologies. The interviews revealed that despite the many plans to enhance the country’s ICT infrastructure, many participants stated that it is still deficient and integration between banks is poor. Thus, the technological infrastructure in Libya is not up to the level required to support the use of modern banking technologies, and the comments from an IT manager (P3) confirm this:

“Our telecommunication infrastructure is still old and unreliable to meet the requirement of e-banking system, therefore, without suitable telecommunication systems, e-banking technology is very difficult to achieve”.

With regard to the lack of key resources, identified as the next obstacle to the adoption and diffusion of e-banking technology, comments were made that essentially related to Libya’s stage of development, which revealed a lack of native expertise in e-banking technologies. The lack of skilled local professionals in advanced modern technology forces a reliance on expensive foreign expertise. As participant P2 (a bank manager) mentioned:
“Our country lacks the expertise in many modern technologies, which makes our organisations depend fully on expensive foreign expertise, which creates financial loads on many organizations”.

And another participant P4 (IT manager) declared that:

“Our country depends mostly on local trainers who educated in IT aboard in the 1980s and 1990s and are not up-to-date with the latest technology”

6.2.2 Shortage of IT Training Courses

Several bank clerks complained that courses were too short, they were not sufficiently advanced and covered only the basics of computer literacy, and that they were not always timed conveniently, as it was not always possible for them to attend. In response to Question 5, one bank clerk P7 pointed out at the critical position education and training play in supporting the use of modern technologies:

“I graduated from a local University and have never done any computing courses and in fact, I have never used computers at all during my studies, so using computers on my job is a shocking experience”.

The lack of reliability, pointed out by P3 and referred to earlier in this section, and the problems in reliability also promoted concerns about security which were found to be the most significant factor affecting the rate of technology adoption in Libya. All participants from all levels expressed great anxiety about security issues such as potential fraudulent activities and errors in conducting customer transactions. As participant P1 (a senior bank manager) said:

“The main concern that is associated with the use of banking technologies is perceived security of the new banking technology, thus if this perception is overcome then we see no reason why our banks cannot provide full picture of e-banking technology facilities in the future”.

However, this comment seems to show some ignorance since it is not only the perception of poor security which causes the problem, but also the fact that security measures are not up to the standard required in the banking industry, so it is not only the perception that has to be overcome, but the flaws in the system. This understanding was clearly expressed by those responsible for IT, as seen in the response provided by an IT manager P3 who said:

“Ensuring security and confidentiality are the fundamental prerequisites before any banking activity involving sensitive information can take place”.

Concerns about the security of e-banking technologies were also raised by bank clerks. As one participant P5 stated:

“Security and data confidentiality issues are the key issues in the adoption of any technology based services in our bank, thus we are still not confident with the new proposed technology systems as we feel that transactions conducted electronically were open to hackers and viruses, which are beyond their control”.

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The issues of confidentiality and privacy of bank customer financial information were considered to be of extreme importance, and were emphasized by many interviewees, especially from top management. As one participant P1 (senior bank manager) said:

“We are still uncertain about to what extent the modern banking technologies are safe to use because in recent years we have received many complaints from our customers with regard to their financial affairs, they do not trust us to keep their financial records on a computer where most of the employees can have access”

6.2.3 System Compatibility
The interviewees raised many questions about the compatibility and integration of current banking programs with the e-banking systems in their bank. The following quote, from bank IT manager P3, gives a clear view of this:

“The integration of our legacy systems with the banking systems has been a difficult task. It requires more skilled staff, it is really difficult to achieve coordination and integration between them”.

This compatibility issue is also most noticeable with the clerks. As participant P6 pointed out that:

“the innovation is not compatible with existing workflows, practices or habits, we feel that even with the use of some e-banking systems, our daily banking operations became more difficult than in the past”

6.2.4 System Complexity
Identified as a significant issue for the development of e-banking in Libya. All interviewees indicated that e-banking systems is a complex and difficult innovation to adopt. As participant P4 (IT manager) who is responsible for the implementation of the e-banking project indicated that:

“I think, the perceived complexity in using e-banking systems is a key barrier to adoption of e-banking projects.”

Implicitly, these comments signal the likely rejection of any new technology that is complicated to use and makes the job harder. And unfortunately, it was most evident from the interviews with those responsible for actually using the technology and delivering the anticipated improved banking services, that it was not perceived as being user-friendly, and four bank clerks (P5, P6, P7 and P8) complained that the use of e-banking technology in their bank was difficult for them, and it lacked security. This comment about insecurity implied that the system itself was not properly developed and that those responsible for its implementation had no confidence in it.

7. Conclusion
In the light of the above findings, there is a clear need for understanding the factors affecting Libyan bank staff attitude towards banking technologies, if successful implementation of ebanking technology is to be gained. It was found that Libyan bank staff are happy to adopt
and implement technological alternatives to traditional manual procedures if they find the new process to be easy to use and help them accomplish their work tasks effectively. However, it was apparent that almost all participants, whether from a technical or a nontechnical background, were fully in agreement concerning the factors put to them by the researcher (as identified in the literature) as being either enablers or barriers. As a result, based on the interviews conducted, this study suggests that in order to successfully introduce e-banking in Libyan banks, the following strategies are recommended:

1. Increasing of bank staff awareness of modern banking technologies through various communication channels (e.g. conferences and workshops).
2. The provision of manuals about how to use the new technology for every department. This was perceived to be essential because staff felt there was insufficient time available for them to attend every training session.
3. Improving the existing telecommunications infrastructure at the local and national level
4. Increasing the level and process of IT training (e.g. courses on IT languages). This is believed to be vital because the experience of IT training programmes so far was that they were pitched at too low a level to prepare staff for the more complex procedures they had to manage with e-banking technologies.
5. Making use of ‘pioneers’ within the bank and using them as role models for others to follow. This was raised as a key support in the adoption of e-banking systems, since social networking has a greater cultural base in Libya than in western countries, and hence a recommendation from one colleague to another regarding the usefulness of a particular process, can be more powerful than in other countries.

Thus, the creation of an enabling environment clearly demands that management pay attention to the range of variables identified in the literature and to these additional factors. That being said, it is not only sufficient to merely consider these factors but also to introduce mechanisms to ensure that proper training is provided, ensure that the technology is user-friendly, and secure, and that senior management become more knowledgeable about both the technology and the types of additional support required by the workforce.

Finally there’s a need for considerable efforts to set the priorities for implementation. More work is needed to provide better understanding of the difficulties of implementation. These findings are merely the start; they must be used to develop an adoption framework or to arrive at lessons and recommendations that will improve the state of IT in the Libyan banking industry.

8. REFERENCES:


