

The Challenges and Opportunities of E-banking Adoption for Small to Mid-Sized Enterprises - SMEs in Jordan

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Abstract— This paper focuses on the strengths and weaknesses of in Jordanian E-banking sector. It also discusses the local awareness and familiarization of E-banking in Small to Midsized Enterprises-SMEs of Jordan and gives a consistent assessment of Jordan's current and future E-banking best practices. This paper initially has used secondary data to provide a study of E-banking in Jordan, how to overcome the hurdles in SMEs of Jordan necessary for SMEs to help facilitate E-banking adoption. The research is subject to top academic journal articles, corporate project data and reports, media articles, government and non-government corporation-based documents and other appropriate information. Data were also collected by using interviews from Jordan E-business based organizations those are offering goods and services on electronic channels and professionals involved with E-banking related activities. The study found that E-banking is steadily transforming the way businesses to be conducted and changing the business environment in Jordan. E-banking can provide speedier, faster and reliable services to the customers for which they are relatively happy. E-banking services not only can develop new competitive advantages, it can improve its relationships with customers. As a developing country, Jordan is not fully known about E-banking sector. As a result, this paper also overviews the issues associated with E-banking e.g. cybercrime and try to explore the future challenges and prospects in Jordan. This paper also compares the local E-business sites with worldwide brand E-business sites to make an effective solution of Jordan's E-banking.

Keywords—E-banking, Small to Midsized Enterprises-SMEs, Challenges, Opportunities, Jordan

I. INTRODUCTION

E-banking is the most modernised automated delivery approach of banking products and services through e-communication channels. E-banking approach that enables customers of a bank or other financial institution to conduct a range of financial transactions through the website. This research talks about the remarkable success in E-banking to backing enterprises. Furthermore, this research approaches to fill the gap by emerging valuation of E-banking structure, E-banking achievement and future innovation in Jordan [1].

A. Research Purpose and Scope

This research focuses majority on the Jordanian industry. This research also focuses on Jordanian several sectors such as retail, wholesale, distribution, shipping, roads and traffic, investment and banking, land services,

logistics etc. Jordan is an emerging country with solid future for growth in E-banking field. If Jordanian customers and enterprises are satisfied with E-banking and overall security:

- ❖ Majority number of people in Jordan will be in the range of facilitation and sophistication of E-banking services.
- ❖ Potential Jordanian readers will understand about the E-banking transactions.
- ❖ E-banking leads to having a competitive business advantage in locally or internationally.
- ❖ Jordanian workforce will understand security & privacy related issues legislation related issues, so they will contribute more on banking sector.
- ❖ E-banking will help the potential users to gain more profitability and helps to lead the day-to-day life more conveniently [2].

B. Objectives

The objectives are identified as per below:

- ❖ Delivering a clear vision of E-banking.
- ❖ Listing the structures of E-banking and illustrate the it's proper existence and justification in Jordan.
- ❖ Finding the previous and present standing of E-banking in Jordan.
- ❖ Identifying strengths and weaknesses of E-banking in Jordan.
- ❖ Offering the consumers, a satisfactory awareness of the E-banking operations in Jordan such as provides 24/7 services as the e-bank always opens and has no cut off period.
- ❖ Performing an effective and efficient valuation of E-banking for SMEs in Jordan.
- ❖ Learning how safe E-banking can help in the economic development [3 & 4].

C. Aim of the Research

The aim of this paper is identifying and assessing the key factors can assist in clear understanding of levels of Jordanian E-business and E-banking sector. In addition, it aims to improve satisfaction in E-banking for SMEs in Jordan.

D. Research Questions

This paper answers the following key Questions about Jordanian E-banking and E-business:

- ❖ What is the past and present status of E-banking in Jordan and why e-banking was not trusted sufficiently by Jordanian at past?
- ❖ What is the current security and privacy status of Jordanian E-banking sector?
- ❖ How E-banking leads to having a competitive advantage in the different levels (e.g. Locally or internationally), particularly in Jordan?
- ❖ How could Jordan build up the opportunity to develop e-banking satisfaction for its own economic growth?
- ❖ How the rapidity of E-banking effect customer satisfaction in Jordan?
- ❖ Does Reliability of E-banking effect client fulfilment in Jordanian banking area?

E. Importance of the Study

This study is very important for Jordanian people and to be able to accept technology acceptance decision in Jordan and also significant in predicting a customer's goal to adopt E-banking. In addition,

- ❖ E-banking is the key trend for financial institutions to keep track of. E-banking is and will be more frequent regular day-to-day practice in the digital arena.
- ❖ E-banking using a virtual channel is the most advanced trend and the cutting-edge competitive business advantage in the Jordanian banking industry [5].

II. LITERATURE REVIEW

This section presents journal and conference articles, books, project reports, online articles, corporation-based documents about basic understanding of E-banking systems in Jordan. It also focuses on the Jordanian E-business environment.

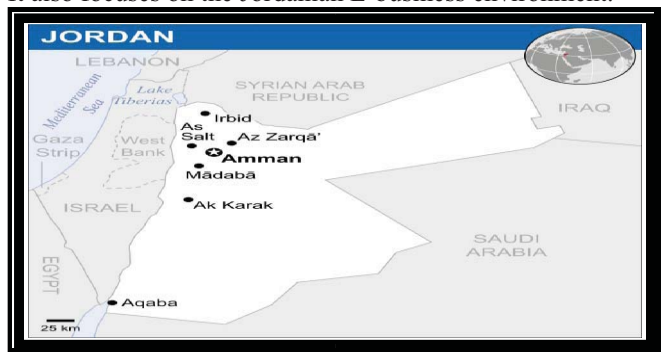


Figure 1: Map of Jordan [5]

Table 1: Overview of an Arabic country: Jordan-2017 [11]

Country: Jordan	Capital: Amman	Economic: Agriculture, Industry, Services
GDP (USD): 40.49 Billion	Currency: Jordanian Dinar	Political system: Constitutional monarchy

Religion: Muslim (97.2%) Orthodox Christians (1.4%)	Population: 7.13 million (2017)	Median Age: 22.1 (2017)
Language: Arabic	Land Area: 88,780 sq km	Approximate Flight Time: (HKG-AMM): 13 hours 50 minutes

As Figure 1 and table 1 shows, Jordan officially the Hashemite Kingdom of Jordan is an Arab country in Western Asia, on the East Bank of the Jordan River. Jordan is bordered by Saudi Arabia to the south, Iraq to the north-east, Syria to the north and Israel and Palestine (West Bank) to the west [5].

The Jordanian government can provide an example in using E-business and E-banking services to reduce costs, lift productivity, efficiency, utilisation and develop better eservices. In addition, SMEs can use e-services for businesses and when replacing any existing business services because they are fit for the purpose, offer the best value for money and provide adequate management of risk to information and assets [6]. The below section provides further brief understanding of E-business and E-banking.

A. The Industrial Scopes of E-business and E-banking

E-business refers to “the buying and selling of products and/or services over electronic systems through internet and other computer networks” [7].

E-business comes together a range of course of actions such as: “World Wide Web (WWW), Electronic Mail (EMail), Internet Applications, Electronic Data Interchange (EDI), Shopping cart software, E-tickets, Domestic and international payment systems, Instant messaging-IM Online shopping and order tracking, Enterprise content management, Online banking, Teleconferencing” [7]. In addition, E-business impact on different sectors: “Public administration, Legal: privacy, security, liability, cybercrime, Intellectual Property Rights (IPR), Healthcare and social care, Utilities, Education & Skills, Transport and logistics, Retail and Trade, Application and services, Technical etc” [8]

E-banking is a part of E-business and responds to customers’ demand and cut the operational activities and related costs and ultimately to expand the market share and pursue a different strategy. E-banking also provides services such as transferring big money amounts among many countries, checking the daily transactions and deposits from the clients who buy the products from the company [8].

B. E-banking Process

Figure 2 shows a quick E-banking process in general.

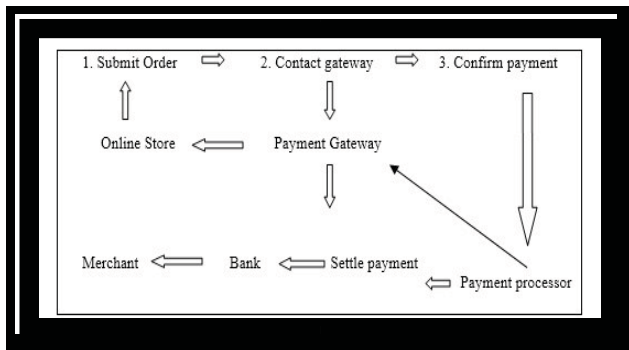


Figure 2: Process of E-banking [8]

C. E-banking Facilities

E-banking provides large number of facilities in general, such as: ‘compatibility, efficiency, effectiveness, trialability, highest security, Information reporting, Delivering the highest safety, User friendly application, Regular transaction, Efficient functionality, E-mail notification, Appropriate and Precise Information, online payment, Direct Debit option’ [9]. E-banking is considered a delivery channel that fits with the modern banking customers who are computer literate and familiar with the internet. It also includes Viewing the balances on accounts, Checking the transactions, Downloading useful information, Transfer of funds, Paying third parties, Making loan applications from a secured website of the bank [9].

D. E-business and Internet Practice in Jordan

The internet facilities, communication sector in Jordan, have significantly improved within last few years including city and countryside areas. An expert in the social media industry told to The Jordan Times “The encouragement both from government and public sectors has encouraged this sector significantly” [10].

“The availability of smart phones in Jordan has significantly increased the number of social media users and this trend is expected to continue to grow,” an social media expert told to The Jordan Times [11].

Leading Social Media for News in Jordan-2018 says “Facebook is the most popular social media site and the most frequently visited website by social media users in Jordan. 36.4 per cent of Twitter users in Jordan check the website daily, 58.9 per cent of Instagram users log in every day, while 84.9 per cent of Facebook users visit the site daily” [11].

In addition, the below tables and figures give more understanding on mobile and internet users of Jordan.

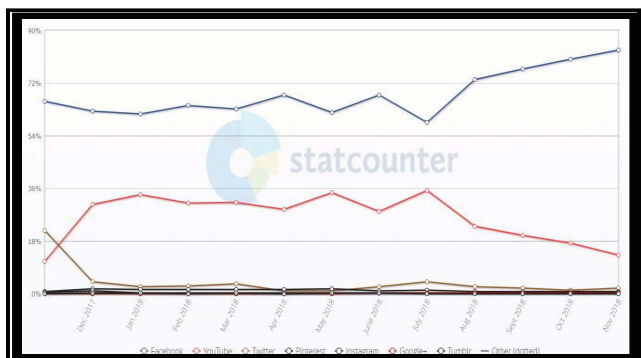


Figure 3: Social Media Stats [11]

Table 2: Jordanian Users on Highest Social Networks-2018 [11]

Social Networks	Estimated Number of Users
Facebook	83.54%
YouTube	13.08%
Twitter	2.03%
Instagram	0.8%
Google+	0.18%

According to table 2, Facebook is the record common social network in Jordan. More than half users are also very active in Twitter, Google and LinkedIn [11].

Table 3: Social Media Use by Gender in Jordan [11]

Male	Female
65%	35%

Table 4: Social Media Users in Jordan [11]

Country	Face book	LinkedIn	Twitter
Jordan	34.14%	2.86%	0.92%

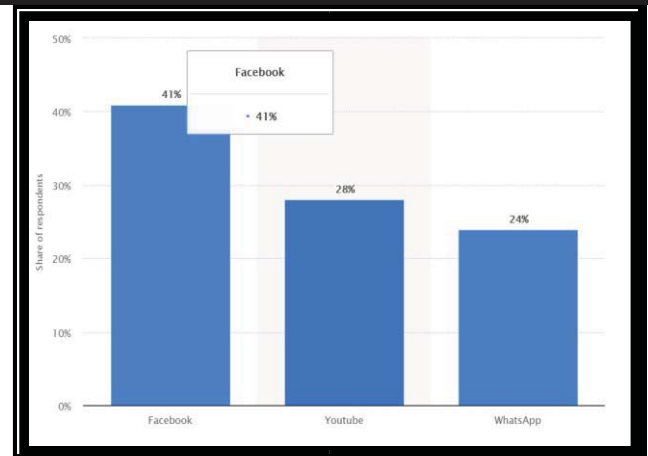


Figure 4: Leading Social Media for News in Jordan-2018 [11]

Table 5: Social Media Used by Aged distribution in Jordan [11]

Age	Social Media Usage
1-17	9%
18-24	36%
25-34	32%
35-44	11%

44+	12%
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Table 6: Smartphone Holders in Jordan [11]

Mobile Holders	Purpose
48%	Taking photos and videoing
28%	Facebooking and Tweet
13%	Civil and Criminal reports
9%	To get healthiness news
5%	To get or receive payments

E. E-banking Field of Jordan in Future

E-banking is important to the “developing financial system of Jordan and particularly to the import-export business. Jordan has been financing highly ICT and E-banking development, concentrating on government and nongovernment sector, efficiency, accuracy, time management properly”. However, enterprises are also important section of the business society, and the flow of ICT into businesses is important for the success of production, progress, and the well-organized functioning of the information society [14].

F. Jordan is the Biggest Market for Online Retail

Jordan unquestionably lives in the techno developed nation. Some of the recent statistics as below:

- ❖ More than 50% of Jordan consumers do online shopping.
- ❖ Online sales revenue in Jordan is now in high achievement recently.
- ❖ More than 53% of consumers purchase from Jordan based E-business or online shops rather than overseas online shops.
- ❖ 75% of online consumers are aged 35-44 years.
- ❖ Debit/Credit cards (Visa, MasterCard, American Express), CashU, PayPal, Real-time Online Bank Transfer, PayFort are the most popular payment methods [14].

G. Barriers in Jordanian E-Business and E-Banking Services

Hardware and software’ high price, websites’ less access, poor IT infrastructure, inadequate IT personnel, Mismanagement of technology, poor law practice, poor security control, Untrustworthy, Language barrier, CRM issues, Insufficient credit card usage, lacking of best communication, Absence of law’s best practices, Very tight foreign exchange controls and access of international credit cards, poor confidence on benefits of E-business, Lacking of Strong commitments from government and non-government parties, Unsatisfactory number of skilled employees in banking sector [15]. All are considered as potential barriers.

H. Present Situation of Cyber Crime in Jordan

The most common cybercrimes in Jordan are Hacking, Denial of Service Attack, Computer virus, Software piracy, Credit card fraud, Spamming, Phishing [15]. In addition: Unauthorised copying, extracting and downloading of data, Damage to system and network etc [16].

III. RESEARCH METHODOLOGY

In this paper, the Secondary research method was selected. It starts with studying and analysing secondary sources to deliver a wider picture of the topic. This study also took on Qualitative research method based on interview process to conduct the study. It also included the analysis of interviews.

B. A. The Approach

The chosen qualitative approach provides a huge number of data. It starts reviewing published secondary sources related with the topic, identifies E-banking satisfaction and possible solutions. The interviews are conducted to collect significant data from ICT sector, E-business and cyber security experts, Jordanian Government and non-Government officials, ICT educators and learners, university key academics etc.

B. Document Analysis

In this paper, the researcher compares between the previous and current state of the research study. In addition, the researcher has visited government and non-government organisations to get quality data. The researcher also has visited to some learning and education hub to get some statistics and publications.

C. The Qualitative Method

The key interview people are informed by email. The researcher has approached to them with proper consents. The researcher has received the positive response. The lecturers have communicated with the students to become volunteer and to get the response. The researcher has also contacted to the Faculty by sending an invitation letter to get right students. Thirty-five potential students have been selected in this occasion.

D. Data Analysis

The interview sessions have taken half an hour to forty-five minutes per session. Interviews have been recorded digitally. iPad, digital audio recorder and Laptop have been used as electronic devices and Skype, Viber & WhatsApp have been used as applications. All data have been sorted and analysed. Qualitative data analysis with relevant computer software (NVivo) have been used. The researcher has categorised all the transcripts into alphabetical order of interviewees’ Surname. Also, the researcher has prioritised the highest contributors.

IV. DATA COLLECTION AND RESEARCH ANALYSIS

Qualitative Results

The outcomes have been developed from the key interviewers such as ICT experts- identified by I1, I2, I3, I4, I5, the Government and non-Government officials-identified by G1, G2, G3, G4, G5, Academics-identified by A1, A2, A3, A4, A5 and Students identified by S1, S2, S3, S4, S5.

V. RESEARCH RESULTS AND KEY FINDINGS

As E-business is promptly increasing in Jordan, although E-banking and E-business are considered noteworthy tools for development to the Jordanian finance [24]. This below section has valued some key findings:

- ❖ E-banking have emerging business potentials in Jordan, but the poor decision making by top management are the basic reasons behind the lag in E-banking sector in Jordan.
- ❖ Authority struggle in E-banking adoption decision and the general lack of investment in E-business applications are the major factors for E-banking dilemma.
- ❖ Limited banks in Jordan offer limited number of eservices through the web, making online transaction or provide the customer with an online banking transaction and online investment application.
- ❖ Still the consumers in Jordan are not fully ready to be E-banking users, they are likely to show worry and insecurity about the e-service and feel less hopeful and innovative about the technology.
- ❖ The private sector and the public sector can make noteworthy development in developing E-business push through its industry association.
- ❖ In order to endorse acceptance, all banks in Jordan should offer their customers with step-by-step demonstrations which demonstrate the steps for using E-banking on the banking website.
- ❖ This paper examines and identified that security is the vital factor to take into attention by customers before adopting an innovation of E-banking.
- ❖ The lack of customers’ trust in web merchants and the electronic channels lead to the failure of the retail distribution channel via internet in Jordan.
- ❖ The effect of the age on E-banking adoption is an argumentative point with the researcher. Young Jordanian people are more likely to be adopters of E-banking online systems than elderly people [17].
- ❖ Jordan government can play a vital role to advance business activities for E-banking and E-business adoption.
- ❖ The Jordanian customers with high income rate show higher level of E-banking acceptance [18].

Below table also shows substantial development of E-banking.

Table 7: E-banking Growth Rate [19]

Year	E-banking Growth Rate
2010	4.80%
2015	8.91%
2017	10.12%
2018	12.38%

Next table also shows the percentage of E-banking adoption between age group of Jordan.

Table 8: E-banking Adoption in Jordan [19]

Age Range	E-banking Adoption
Over 50	10%
41-50	20%
31-40	32%
21-30	27%
Under 21	10%

Table 9: Most Popular Payments Methods in Jordan [19]

Online Payment Method
Visa, MasterCard, American Express
CashU
PayPal
Real-time Online Bank Transfer
PayFort

Table 10: Cyber Crime in Jordan [20]

Cybercrime	2015	2016	2017	2018
Facebook Scam	200	289	419	611
Debit/Credit Card Fraud	813	1012	1134	1319
Lottery Fraud	36	54	77	91
Email Hacking	77	89	101	209
Abusive Calls/SMS	71	93	114	197

Table 11: Cyber Criminals Arrests by Age Group in Jordan [21]

Age	Numbers of Arrests (2016)	Numbers of Arrests (2017)	Numbers of Arrests (2018)

0-18	100	129	199
18-30	3839	5009	7200
30-45	2916	3817	4389
45-60	839	1017	1122
60+	77	91	111

III. CONCLUSION AND RECOMMENDATIONS

This study principally talks about E-banking satisfaction in Jordanian Small to Mid-Sized Enterprises-SMEs. But, E-banking and its related technologies are still in its beginning stage in Jordan because of blocks, particularly Cyber Crime. The researcher has provided some recommendations. For accomplishing the best possible outcome from the E-banking, the researchers have offered below recommendations.

- ❖ Jordanian all banks should improve their website more user friendly and they should need to examine in building the website infrastructure to ensure that the services will be user friendly in the design as well.
- ❖ Jordan Government must concentrate most on Acts, policy and procedures for ICT.
- ❖ Launch best law practice guidelines.
- ❖ Regular launch of digital forensic workshop for examination.
- ❖ Distribution and understanding to developed countries' proficiency in relation to implementation of a complete legal guideline for adoption of E-banking and E-business in Jordan is significantly important.
- ❖ Dependable, accurate and present evidence are always required for E-banking on judicial requirements [22].
- ❖ Jordan needs a modernised education system that can bring educators and learners with skills and knowledge to obtain E-banking and improve advancement and distinctiveness and overall ICT experience.
- ❖ Jordan should be self-governing from both the educational institutions and government spokespersons [23].
- ❖ Jordan Government should provide a strong legal framework for E-banking and good practice the proper National ICT security policy.
- ❖ Launch good practice guidelines against cybercrime.
- ❖ Establish digital forensic laboratory for proper examination and finding the cybercrimes.
- ❖ To do internal and external training to the educators and learners on ICT misconduct inquiry.
- ❖ Jordanian ICT experts should develop own software for banking systems more frequently [24].
- ❖ Virtual transaction must have validity and privacy.

- ❖ The smooth connectivity of the internet and network improvements of Jordan is expected to improve.

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