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Internet banking adoption in Azerbaijan: Factors influenced consumers

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Abstract

The banking industry has changed dramatically since internet penetration and the introduction of the internet banking concept. Internet banking is a new type of information system that uses innovative resources of the Internet, through which customers can use an increasing number of banking services. The primary objective of this research is to define the factors that influence internet banking adoption in Azerbaijan, such as internet banking is influenced by perceived ease of use and perceived usefulness.

A total of 95 respondents in Azerbaijan responded through an online questionnaire. The results of the survey tested clearly that the use of online banking is influenced by prior internet knowledge and information on online banking, perceived ease of use, and perceived usefulness. The results also revealed that age, gender, and education has a significant impact on the usage of online banking. Finally, this paper suggests that an understanding and recognizing of the factors affecting the intention to use internet banking is very important to practitioners who plan and foster new forms of banking activities in the current competitive environment.

Keywords: **Internet, Internet banking, Internet security, Adoption, Perceived usefulness**

Introduction

Today in the era of information technology every business wants to deliver its products and service via various electronic channels. Banks are also one of them which are today more focused on electronic delivery of services and its importance of traditional branch networking has gradually decreased. Remarkable advances in technology and aggressive combination of information technology encourages the transformation of traditional banking into online banking. Technology is playing a very crucial role in the competitive era of the financial industry. The recent developments in technology have created a new service concept and service environment. Technology has changed the way of buying and selling of services. One of the radical changes in the banking industry has been the movement of

consumers from traditional to e-banking such as the internet, telephone, and mobile phones in private banking.

Through Internet banking, customers can execute a number of banking transactions from any place at any time, without a need for visiting their bank branches. This also proves to be advantageous for the banks, as there is increased flexibility and efficiency in delivering the banking services to the customers. This would further enable banks to differentiate their services from competitors, resulting in increased value added to diversified customer segments. The internet banking usage rate is found to be very high in developed nations such as the United States and Europe, whereas in the case of developing counties like Azerbaijan, the adoption rate is still found to be growing at a slower rate.

The expansion of online banking has matched the increase of high-speed broadband connectivity and the increasing maturity of Internet users. Another factor in the growth of e-banks is that banks have discovered the advantages of e-banking and start offering it as an alternative to clients.

The Internet population in the world is rapidly growing, providing new opportunities for performing activities like communication, shopping, banking, etc. There are approximately 4.5 billion internet users in March 2020[1] across the world. In Azerbaijan, it was reported about 8 million Internet users as of May 2020, with the penetration of only 79% of the population[2]. Although the Internet population is growing at a faster rate in Azerbaijan, the usage of Internet banking has been slower than other developed countries.

Results of Deloitte's global digital banking survey among of 17,100 consumers in 17 countries on their digital banking behaviors and channel usage propose that banks should continue to invest in making internet banking a remarkable and high-quality customer experience.[3] The survey findings indicate online banking may remain a keyway of customer interactions in the predictable future, even among mobile banking users.

There is a need for Azerbaijan banks to understand their customer's perceptions about internet banking services, to persuade them for using these channels for performing their banking transactions. Many research studies have been conducted in the field of Internet banking adoption, examining the factors influencing bank customers intention to use Internet banking. Based on the extensive literature review, it was found that there are very few studies that have developed and validated a research model explaining the interactions among the influencing factors and how they ultimately impact customers' decision to adopt Internet banking in Azerbaijan. Hence, this research is conducted to find out the influence of perceived ease of use and perceived usefulness (Independent variables) upon Internet banking service adoption (Dependent Variable).

Literature Review

There has been a significant development in the financial sector over the last 40 years because of the improvement of information communication technology. According to Consoli [1], there were number of regulatory constraints until the early 1980s and 1990s which hampered banks from adopt modern technology. As a result, there was a heavy reliance on customary branch-based delivery of financial services and little pressure to change. This changed gradually with the deregulation of the banking industry during the 1990s. This time the growing importance of Information Communication Technology (ICT) has resulted in increased competition and demand for rapid change. Driven by challenge of increasing and capturing a large part of the banking industry, some banks have invested in

infrastructure to extend their regional and customer coverage. Some found a more innovative approach to providing the banking services over the Internet. Indeed, the advert of internet banking has forced banks to reconsider their IT approaches in order to remain competitive. Today customers expect even more from the banking services. They expect new levels of comfort and flexibility [2,3] complementary to the strong and easy to use financial management instruments, products, and services that convenient banks unable to provide. Internet banking services enables banks to perform transactions such as transferring funds, payments of bills, access to latest balances, statement viewing, and account detail viewing, printing, and downloading of statements. This has been a radical change towards self-service platforms in the banking delivering channels. According to Quereshi [4] customers moved from traditional banking to internet banking system, the key reason being that of perceived ease of use, perceived usefulness, and security provided by online banking. Even though the internet has ever-growing importance in the banking sector, not all financial institutions (banks) that have adopted internet banking have been successful. Internet banking is yet in its early stage in developing countries. Just a few banks create such systems while others merely use the World Wide Web to deliver information about products and services [5]. Deyoung [6] further specified that this low admission is example of risks of launching new goods and services into the marketplace. Several studies show that online bankers are banks` most profitable and income earning segment [7-9]. There may be two basic reasons behind development and growth of internet banking: cost savings for banks and shrink of branch networks which create opportunities for the self-service channels as many customers consider that branch banking took too much time and effort [10]. The key reasons for embracing internet banking is also savings in time and costs and independence from location [11-13].

Online banking offers many advantages to the customers [14,15]. Several studies have analyzed consumer adoption and the growth of internet banking.

However, in global terms, the majority of consumers are still not using the online banking channel. There are multiple reasons for this: first new online customers need first to learn how to use the service Mols et al., [16] and second, users have been afraid of security issues [13,17]. Ndubisi et al., [18] also established the importance of adequate security to raise the confidence of consumers to use internet banking.

Background and Problem

Development of internet banking is considered as a revolutionary development, but broadly speaking, internet banking is another stage in banking evolution. As ATMs, online banking gives customers another medium for conducting their banking operations. It might not be rational to believe that this channel will fully overtake existing networks, and experience so far indicates that the future is a combination of "clicks (e-banking) and mortar (branches)". While start-up costs for an internet banking channel can be relatively high, once a critical mass is reached it can quickly become profitable.

Azerbaijan has 10 million people and quite a high population density. Slightly more than 53% live in urban areas, with 23% living in the capital Baku[4]. The total population is growing by an average of 1% a year. Poverty incidence decreased from almost 50% in 2001 to 7.6% by the end of 2018 [19]. Male and female literacy is high, with 12 years of mandatory regular education; more than 95% of the country’s population completed primary and secondary school [20].

Azerbaijan’s economy grew rapidly between 2006 and 2008, due to large and growing oil

exports; the growth, however, slowed to 0.2% in 2011 because of vulnerability in oil production. In comparison with the industry sector, which contributed 57% to GDP in 2019, the share of agriculture is tiny, accounting for only 7.9% in that year[5]. Nearly 56% of the population works in the services sector, which accounts for 29% of GDP. Small and medium-sized enterprises, meanwhile, account for 10% of GDP. GNP per capita was $4,851 in 2019.

Azerbaijan's mobile network covers most of the country and is widely used; the penetration rate for mobile phones is about 107%, with subscriptions exceeding 11 million [21]. The market counts three mobile providers that offer 2G to 5G: Azercell and Bakcell, Nar Mobile. The ICT market is also well established and continues to grow fast: as of 2019, 73% of households owned a computer and 78% had an internet connection[6]. However, fixed telephone network services are not strong. There are few chief providers in Azerbaijan: Baku Telephone Communications Production Association, Delta and Aztelecom.

Azerbaijan has 30 commercial banks, 2 of them state-owned and 14 with foreign capital as of the end of 2019[7]. In total, the banks operate 508 branches spread throughout 27 cities, with 28659 ATMs. The International Bank of Azerbaijan, Kapital Bank, Bank Standard, Xalg Bank, and PASHA Bank, the five biggest banks, had 65% of market share by assets as of end 2019. The finance sector also includes 29 non-bank credit organizations and 45 credit unions. The major banks offer their products via the latest technological channels, such as e-banking, mobile banking, internet banking, or automated bank corners. Nowadays, the infrastructure of commercial banks in Azerbaijan is relatively good. The number of ATM increased by 40%, the number of POS terminals raised almost by 9 times from 2010 to 2019[8]. The number of transactions carried out by debit and credit cards increased by 250% or 3.5 times with 3 times the growing volume of transactions during the same period.

The number of branches, especially ATMs per capita, although concentrated in Baku and other urban areas [22]. Population in rural areas and the agriculture sector experience shortage in quality of access. At 400 per 1000 people, the number of deposit account is also tiny, as is the share of adults investing using formal accounts (1.6 per cent). This raises concerns about the efficiency of the banking sector in providing financial services.

After a period of high economic growth, Azerbaijan enjoys the high income and low poverty rate. Mobile phone coverage and internet usage are high, as are digital literacy indices. In terms of access to financial resources, urban residents have relatively good access to branches, ATMs and commercial banks offer e-banking and, in some cases, mobile banking. However, utilization can be improved as the share of bank accounts used for savings is small. By contrast, the rural population, composing almost half of the total population, has considerably lower access to bank infrastructure. This is problematic as the agriculture sector employs almost 40% of the population.

The main objective of Azerbaijan's financial sector is to expand access in rural areas; mobile financial services can be ideal for this. A bank-led model may be preferable as a compatible mobile banking platform (MobilBank) already exists. Cooperation with mobile network operators or online payment services such as GoldenPay could be expanded for better rural coverage, although this may require additional training and certification. In order to stimulate competition between banks and increase customers surplus by lowering prices and developing better services, consider using other platforms like MobilBank under the leadership of other large banks.

Also, an m-payment system should be introduced to simplify money transfers in rural areas,

where penetration of bank branches or payment terminals is lower, and to increase the share of the money that is directed through the banking system and eventually stored in formal bank accounts instead of being paid out immediately.

Research Questions and Methods of Data Collection

This study aims to examine the effect of information on online banking, perceived ease of use, and perceived usefulness on Internet banking service adoption in Azerbaijan. Qualitative exploratory research using a questionnaire was applied. The study is mainly based on primary data. Primary data was collected through an online survey method from April –May 2020 in Azerbaijan. The questionnaire was developed based on the experience of the researchers and review of literature on the topic done by the researchers.

The questionnaire of this study consisted of 10 questions as shown in Appendix 1. The first four questions of the questionnaire related to the profile of the respondents like age, gender, education level, and frequency of internet banking usage of respondents. The anonymity was ensured, the respondents' names were not required in order to ensure the accuracy and reliability of the respondents` opinions and answers. Likert five-point scales ranging from "Strongly Agree" to "Strongly disagree" were used as a basis for the rest five questions of the questionnaire. These questions seek to explore and understand the cognition and manner of respondents about using the internet banking service. A total of 95 respondents in Azerbaijan were sampled for responding. All the respondents were professionals from different sectors of the economy.

Source: Authors' calculation

Appendix 1: Questionnaire

PART I:
Please select the response that best describes your answer with a
1. Age Group: □ Less than 25 years □ 25-35 years □ 36-45 years □ 46-55 years □ > 55 years
2. Gender: □ Male □ Female
3. Education level:
□ Higher secondary □ Bachelors/ Diploma □ Masters □ Doctorate / PhD
□ Professionally qualified
4. Usage of internet banking
□ Regularly □ Frequently □ Often □ Occasionally □ not at all

PART II: Please state your level of agreement or disagreement to the following statements regarding your attitude towards internet banking with a

Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SD)				
STATEMENTS				SA	A	N	D	SD
1. Internet banking enables people to conduct financial transactions more quickly.								
2. Internet banking improves one's effectiveness in conducting banking transactions.								
3. Internet banking makes it easier to conduct banking transactions								
4. Internet banking saves time compared to traditional banking.								
5. Internet banking provides convenience since it is available 24 hours, 7 days of the week.								
6. Overall I believe that Internet banking is easy to use.								

The study also revealed that education, gender, and age play an important role in the usage of internet banking. Not much research has been made in these filed as they have focused more on technology adoption than people. The study confirmed the conceptual framework that, if skills can be upgraded, clients will be more active in online banking. During the research, the following research questions will be answered.

H1: Perceived usefulness has a positive impact on consumer adoption of internet banking

H2: Perceived ease of use has a positive effect on consumer adoption of internet banking

Perceived Usefulness (PU)

Davis [28] argues that the decision to use a new technology is defined by how much the person believes that the provision of goods or services is cost-effective compared to the current method. PU is determined by the degree to which a user believes that using a specific technology will improve his performance. PU has been validated as an important variable affecting user acceptance of technology and has therefore received a lot of attention from previous researchers. Internet banking provides two major advantages: convenience [11,23-25] and quick service [24,26], compared to traditional banking services. Convenience and effective management of personal finances are two advantages of using internet banking. Thus, if customers believe that internet banking is perceived to be beneficial, then the users is more likely to perceive internet banking as easy to use and reliable and also influence the adoption of internet banking. Hence the following hypotheses:

H1: Perceived usefulness has a positive impact on consumer adoption of internet banking

Perceived Ease of Use

Perceived ease of use means the degree to which a person trusts that using a particular system would be effortless. Conducted research indicates the evidence of the significant effect of perceived ease of use on usage, either directly or indirectly through its effect on perceived usefulness [27-29]. Easy-to –use information technology would be less of a treat to individuals [30]. This suggest that perceived ease of use is envisaged to have a positive impact on customers in their interaction with internet banking systems. It also grounds that ease of use positively correlates with the use of technologies, such as computer software 28,29]. Suganthi et al., [31] label one of their dimensions "ease of use" showing its impact on adoption of internet banking. Thus, the more the customer perceives internet banking as easy to use, the more person is likely to adopt internet banking. Hence the following hypothesis:

H2: Perceived ease of use has a positive effect on consumer adoption of internet banking

Results and Analysis

This study is conducted by using Azerbaijan as a sample and the sample size is 95 respondents. The data was collected via an online questionnaire.

Of the 95 adults who participate in the random sample, 54 are men and 41woman. The ages are 32% (under 25), 28% (25-34), 26% (35-44), 7% (45-54), 6% (over 55 years old). The educational level is 8% Higher secondary, 47% Bachelor Diploma, 29% Master's Degree, 14% Doctorate/Ph.D., and 1% Professionally qualified. This result shows that age and education level are an important factor that impacts on internet banking usage. The result indicates the dominance usage of internet banking among young users.

Frequency of using internet banking (IB): study shows that about 41.1% of the respondents use internet banking (IB) regularly, 10.5% of the respondents use IB frequently, 24.2% of the respondents use IB often, 13.7% of the respondents using IB occasionally, and 10.5% of the respondents do not use IB at all. The demographic profile of respondents presented in Table 1.

Table 1: Demographics of Respondents

Demographic Group	Demographic Category	Frequency	Percentage
Gender	Male	54	56.8%
	Female	41	43.2%
Age Group	Under 25 years	30	31.6%
	25-34 years	27	28.4%
	35-44 years	25	26.3%
	45-54 years	7	7.4%
	More than 55 years	6	6.3%
Education	Higher secondary	8	8.4%
	Bachelor Diploma	45	47.4%
	Masters	28	29.5%
	Doctorate/PhD	13	13.7%
	Professionally qualified	1	1.1%
Usage of internet banking	Regularly	39	41.1%
	Frequently	10	10.5%
	Often	23	24.2%
	Occasionally	13	13.7%
	Not at all	10	10.5%

Source: Authors' calculation

Internet banking helps people to make financial transactions faster. As shown in Table 2, there are about 94.7% of the respondents strongly agree and agree that internet banking (IB) enables them to perform the financial transactions more quickly. There is 3.2% of respondents who neither agree nor disagree that IB allows them to make the financial transactions more quickly. 2.1% of the respondents strongly disagree.

Internet banking also increases the quality and effectiveness in conducting banking transactions, 40% of respondents strongly agree and 53.7% agree on the effectiveness of IB compare to brick and mortar banking services provided.

Internet banking (IB) promotes time savings compared to conventional banking: 54.7% of the respondents strongly agree and 42.1% agree that internet banking (IB) promotes time saving compared to traditional banking. In addition, 56.8% of respondents strongly agree

and 33.7% agree that IB allows them to make the financial transaction at any time, and 7*24 during a year. It means that the adoption of IB has excluded the time and place boundary restrictions. Analysis of respondents' perceptions in respect of Internet banking is displayed in Table 2.

Table 2: Analysis of Respondents Perception in respect of Internet Banking

STATEMENTS	SA	A	N	D	SD
Internet banking enables people to conduct financial transactions more quickly.	52.6%	42.1%	3.2%	0.0%	2.1%
Internet banking improves one's effectiveness in conducting banking transactions.	40.0%	53.7%	5.3%	0.0%	1.1%
Internet banking makes it easier to conduct banking transactions	46.3%	48.4%	4.2%	0.0%	1.1%
Internet banking saves time compared to traditional banking.	54.7%	42.1%	2.1%	0.0%	1.1%
Internet banking provides convenience since it is available 24 hours, 7 days of the week.	56.8%	33.7%	6.3%	2.1%	1.1%
Overall, I believe that Internet banking is easy to use.	49.5%	40.0%	8.4%	1.1%	1.1%

Source: Authors' calculation

Ease of use of internet banking (IB): 46.3% of the respondents strongly agree and 48.4% agree that internet banking (IB) is the ease of use. The simplicity of internet banking (IB) process 49.5% of the respondents strongly agree and 40% agree that Internet Banking (IB) is easy to be used.

Limitations and Further Research

The study has a few important limitations that affect the generalizations of the findings. This study was conducted on a smaller sample size of 95 respondents in Baku city. The size of the sample is very small to make generalizations on the adoption of internet banking. It is also found that the number of male respondents was higher compared to female respondents in this study. Future studies should consider the equal proportion of male and female respondents. It is also possible to explore other variables besides perceived ease of use, perceived usefulness to confirm further influence in adoption level. It is also useful to explore the profession between the government sector, private sector, and self-employed. A more comprehensive study of Internet banking adoptions can be conducted if the number of respondents reaches a significant number.

Conclusion

This study is focused on the adoption of internet banking among consumers in Azerbaijan. It investigates the impact of perceived ease of use, perceived usefulness on Internet banking adoption behavior among respondents. This study adopts a quantitative approach using a questionnaire survey among 95 respondents in Azerbaijan. The results indicated that hypotheses regarding perceived ease of use, perceived usefulness of Internet Banking are supported. This confirms that customer knowledge and peer influence would motivate them to adopt Internet banking services. Therefore, the banks in Azerbaijan should make their customers understand how Internet banking services will be more beneficial, easy to use,

more trustworthy, and less risky to improve their intention to use Internet banking services in Azerbaijan. The study also revealed that education, gender, and age play an important role in the usage of internet banking.

Footnote

[1]https://www.internetworldstats.com/
[2]https://www.internetworldstats.com/
[3]Val Srinivas and Richa Wadhwani, The value of online banking channels in a mobile-centric world Research from the Deloitte Center for Financial Services, 2018
[4]The State Statistics Committee of Azerbaijan Republic data 2019
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