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## **Perceived Barriers towards Adoption of Internet Banking among Rural Dwellers: An Empirical Study of Pakistan**

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### **Abstract:**

*Internet banking is an essential component of banking services growing rapidly in developed countries unlike developing countries. The study attempts to find the perceived barriers towards the adoption of internet banking among rural dwellers of Pakistan and recommend ways for banks to remove these barriers. Different variables are taken into consideration as independent variables which affect the adoption of internet banking particularly among the rural inhabitants.*

*This research aims to provide recommendations for the banks offering internet services after analysing the barriers to adoption of internet banking perceived by the people living in rural areas of Pakistan. In this paper, highly perceived barriers identified by previous studies are demonstrated in literature review in order to form a basis for developing questionnaire and comparing the findings. Data were collected from 150 people residing in villages. The barriers faced by rural residents are categorized under technological and psychological barriers. Findings show that the poor internet services, loss of one to one relationship with human tellers, the low perceived value of internet banking as compared to traditional banking, safety and security concerns and lack of knowledge, education are perceived to be the most significant barriers to adoption of internet banking among rural dwellers of Pakistan. Hypothesis will be developed to show the relationship between different variables and performance.*

### **1. Introduction**

Significance of internet in the banking system had been realized quite early and later on it was used as a tool in the globalization of the entire banking system. Internet banking service provides its customers the facility to access their accounts without any formal documentation. It also offers features of retail banking like balance information, bill payment, PC banking, mobile banking, ATM, electronic funds transfer, account to account transfer, online statements and credit cards. These are the services provided by banks without using the original documents and signature at anytime and from anywhere, which certainly makes ease for customers. (Aslam, Khan, Tanveer and Amber 2011)

Also the feature which is commonly exclusive to internet banking includes importing data into personal accounting software. Some online banking platforms carry account aggregation to permit the customers to observe all of their accounts in one place whether they are with their main bank or with other institutions. Banking through internet is considered as a polite delivery channel for the banking services. (Sumra,Manzoor, Sumra and Abbas 2011).

A variety of factors has been identified based on customer's perception as determinants of the adoption of internet banking including perception about: ease of use, accessibility, availability and usefulness. Security and privacy of information however are categorized as most Influential factors by many of the researches. (AslamKhan, Tanveer and Amber 2011).

Farmers and others that live in rural areas seem to gain more from information technology or internet banking particularly. They can overcome geographical and social barriers to communication and information through internet banking (Warren, 2002). Adoption rate of internet banking is very slow in rural areas due to the existence of some technological and psychological barriers. The purpose of this paper is to examine and evaluate the nature of these barriers and to recommend some valid solutions to eliminate barriers.

Apart from badly developed systems and structures, the developing countries may benefit from the technologies offered by today's world while building up their financial intermediation infrastructure. These technologies are provided through electronic banking. (Sumra,Manzoor, Sumra and Abbas 2011).

### **2. Literature Review**

The incredible growth of internet banking is changing the way banks conduct their business with customers. Many banks have developed internet as a tool to offer a variety of services to the customers. Compared to traditional brick-and-mortar banking, the

internet banking service involves non-human interaction between customers and online banking system. Studies show that high level of service quality ensures high level of customer satisfaction and can induce more customers to adopt internet banking. (Jun and Cai 2001)

Internet banking refers to the use of internet facility as a distant delivery channel. It is becoming the most convenient way for the customers to do their daily banking transactions. This encourages banks to adopt ways to develop channels to meet the customer's expectations and intense competition. Delivery is highly important in fulfilling customer's need. To avoid confusion and frustration banks need to mention clear instruction about the use of internet banking (Shariq, 2006).

Technology is now becoming the major factor for the organizations' success and as their core competencies. So the banks are investing more on providing on the customers with the new technologies through e banking. The electronic banking has revolutionized and redefined the ways banks were operating lately. Banking through internet is thought-out as a complimentary delivery channel for the services rather than a replacement of the brick and mortar banking branches (SumraManzoor, Sumra and Abbas 2011).

There is a clear need to study the factors that influence customers' intention to adopt internet banking so that banks can better formulate their marketing strategies to increase use of internet banking in future. This study aims to investigate the behavioral intention of customers to use IB services with a focus on users' perceptions of ease of use and usefulness of IB, and of security of using this new technology to meet their banking needs. (Cheng, Lam and Yeung 2011)

Psychological and perceived behavioral control factors rather than social influence play a significant role in affecting the intention to adopt Internet banking. In particular, perceptions of advantage, risk, trust and ease of use were found to influence intentions to adopt Internet banking services. In addition, confidence and security in using such services were also found to influence the intentions of people to adopt internet banking. (Tan and Teo2000)

There are many complexities in adopting the Internet Banking in Pakistan. Barriers such as easy access to computers, familiarity with technology, reliability of technology, unfriendly website, fear of government tracking transactions, security risk are faced by the rural dwellers of Pakistan. Implementing Internet Banking in Pakistan is difficult with the presence of these barriers (Akhlaq and Shah 2011).

Ease of use and usefulness; have been considered to be fundamental determinants in the acceptance of various internet banking facilities. These determinants may not, however, fully explain the users' behavior in the changing environment such as Internet banking. Trust is another major determinant of adoption of internet banking. Trust has a significant impact on the acceptance of Internet banking. (Suh and Han 2002)

Adoption of the new technological products majorly depends upon the customer perceived value of a product or service. It is customer's perception about the product or service performance to fulfill needs, and the associated costs to realize the perceived benefits among other available alternatives. Internet banking subscribers perceive the service costlier as compared to the benefits it provides. Low perceived value results in negative word of mouth and work as barrier towards the adoption of the services by new potential subscribers (Aslam, Khan, Tanveer and Amber2011).

In conducting financial transactions trust also plays a vital role. Users don't feel comfortable in providing sensitive information such as financial details on the internet. In a research on consumer's adoption of internet banking it was found that 70% of customers showed their concerns on security. Web security is a considerable determinant of customer's intentions to use internet banking. Customers find three reasons for not trusting internet banking: security of the system, distrust of service providers, and worries about the reliability of the service (Chandio 2011).

Both banks and their customers stand to benefit substantially using the Internet to collect information. Customers can benefit from allowing banks to collect and integrate large amounts of personal information that help banks to tailor a wide range of products to individual demands (Furst, Lang and Nolle 2000). To develop marketing strategies for promoting new forms of electronic banking, banking industry needs to highlight the factors that affect the customer's behavior to use internet facility. From the customer's perspective, It can save costs and save time access to multiple channels for operations of the bank. And from the banks perspective, it's an opportunity to search for new customers in target markets, geographic expansion and competitive activities. Perceived security, perceived convenience, perceived usefulness and perceived safety are the determinants of adoption of internet banking facility among rural dwellers of Pakistan particularly (Gilaninia, Fattahi and Mousavian2011).

The most important aspects that prevent people to adopt internet banking are convenience, ease of use and its compatibility with customer's lifestyle. The early research in the financial field revealed that the reason for non-use was the preference for conducting transactions through a human teller rather than a machine. This is a psychological barrier in the way of adoption of internet banking. Lack of knowledge and experience also hold back adoption. Another factor which is an important determinant of demand for internet banking service is the number of people having access to internet. Many securities related aspects also affect the customer's preferences (Khan, 2007).

The reason of low adoption rate of internet facility among rural dwellers is that people like to interact with humans rather than machines. They think it's easy to ask questions and this way is less prone to errors. Although, electronic banking provides many opportunities for the banks, it is also said that the current banking services provided through Internet are limited due to security concerns, complexity and technological problems (kaleemand Ahmed 2008).

E-banking faces certain issues that are considered as major problems of Internet banking amongst which include: Internet criminals and hackers attempt to steal customer information through various methods. In other word, there is increased concern about privacy and security of customers' information. Fund transfers make it very convenient for criminals to hide their transactions. There are some other problems like: there is inaccessibility to e-banking due to poor internet infrastructure, customer rigidity to new technology, low educational level, lack of computer literacy and constructive use of Internet services; language, cultural and logistical barriers; different legislation and information overload to customers. As a result of the aforesaid problems,

online banking services have thus become a critical concern of financial institutions during this era of class technological breakthrough. These problems lead to the low adoption rate of internet banking among rural dwellers of Pakistan. (Gbadeyan and Akinyosoye2011)

Customer adoption is a recognized dilemma for the strategic plans of financial institutions. The central factors that affect an individual's decision to use or not to use online services are: the difficulties of using the Internet, the individual's age, the fear of changes in the banking sector due to technological development and the lack of information concerning products and services provided through electronic delivery channels. Person's demography, motivation and behavior towards different banking technologies and individual acceptance of new technology are the factors that determine consumer's attitude towards online banking. It has been found that customer's attitudes toward online banking are influenced by the prior experience of computer and new technology (Safeena, Kamani and Date 2010).

The triumph of Internet banking depends upon generating online transactions. A great number of Internet transactions can be generated if the bank has a considerable customer base, a high adoption rate among its customers, and customers who actively use the system. For example, recent analyses of Internet usage suggest that users of internet are mostly in urban areas and are rich people. It shows that people in rural areas are reluctant to use internet facility. It also appears rational to assume that a market with a highly-educated population is more likely to have customers that will conduct banking transactions through the Internet (Sullivan, 2000).

Perceived benefit and risk has a significant influence on intentions to use internet banking. Research reveals that the latter is a more influential factor, implying that controlling the risk of online banking and security issues are more important than offering benefits. Managers should decide how to allocate resources to retain and expand their current customer base. However, building a risk-free online transaction environment is much more difficult than providing benefits to customers. (Lee, 2009).

Task familiarity is important factor in promoting the use of internet banking among rural dwellers. It represents the degree of non-variability and certainty of activities that a user needs to determine when using the technology. The work tends to be more ordered and structured and the processing requirements tend to be minimal when non-variability and certainty in the task sphere are high. In the context of Internet banking, although it was developed with the purpose of providing customers with effortless point-and-click actions, some users might still be irritated by the unfamiliarity of performing the task in the new Internet environment. Hence task familiarity have a significant influence on perceived ease of use and hence on adoption rate of internet banking. (Chau and Lai 2003)

Pakistani banks can gain a lot if they conduct their business via internet. This could mean immediate expansion of their marketplace to national and international markets. Quick response and improved quality promote customer satisfaction. They could achieve customers' satisfaction and hence customer retention. Customer satisfaction is the key to organizational success for it is the satisfied customer who accounts for the repeat business that the organizations need to survive and thrive. Therefore the Internet as a source of product delivery would enable the banks to provide improved services to existing clients and customers and also to retain them and draw new ones whilst operating at a low cost as well. This may help to restore the viability of the banks and strengthen their business, as success in e-commerce will have an immediate impact on the institutions' productivity and profits. (Nazir, Akhtar and Arshad2011)

There are some ways a country can adopt e-readiness. These factors depend on country's social, economical, political profile and may vary in size and quality depending upon digital facilities and infrastructure available for Information Communication Technology. Government and policy makers have to take steps in this regard and make environment feasible for ICT and digital services and create awareness among society about allied profit which customers and banks can get by linking commerce and societies with these technologies. Country's e-readiness is essential for economical development of country (Dar 2006).Institutions with Internet banking tend to outperform non-Internet banks in terms of profitability and customer base. The banks with highly secured internet banking facilities and fewer complexities are profitable and less prone to losing their customer base. (Furst, Lang and Nolle2000).

### **3. Methodology**

#### *3.1. Instrument and Measures*

The research instrument is based on self-administrated survey questionnaire. These questionnaires were filled by randomly selected rural dwellers having bank accounts. The questionnaires mainly consist of close ended questions. The purposes of these questions were to know the barriers either psychological or technological faced by rural dwellers of Pakistan. This research aims to examine the barriers a rural dweller faces while adopting internet banking and impact of these barriers on the overall performance of banking industry in Pakistan. Statistical Package for Social Sciences (SPSS) used for analyzing the data and the Regression Analysis will be used to find out the significance level of the hypothesis.

#### *3.2. Procedure*

Data in this research collected with both primary and secondary research. Primary data is collected with help of self-administered questionnaire these questionnaires and filled by the people randomly selected from the rural areas near Lahore. To support the research objectives secondary source of data was also used. Secondary source includes articles relevant to this study, taken from international journals.

The current study was carried out in Punjab, representing the rural area of Pakistan. A sample of 200 was selected. Selection criteria were to have an account with the bank offering internet service and being its user as these are the prerequisite for every customer to subscribe the internet banking services. A structured questionnaire was designed as data collection instrument. The

data was collected by visiting different villages e.g. Munawan and Barki situated in Punjab. Each respondent was given questionnaire to fill in after an introductory interview to ensure that the respondent was well aware of the internet banking and was a regular user of banking services. To build up demographic profiles of the respondents in order to identify the probable relationship between their demographic characteristics and adoption of internet banking categorical variables were included in questionnaire. The data was then analyzed using descriptive statistics using SPSS. In order to measure the respondents' perceptions on 18 variable, they were asked to express their attitudes on a 5-point Likert scale (1=strongly disagree to 5=strongly agree).

200 questionnaires were distributed but after accounting for non response or implicit and explicit refusals 150 valid questionnaires are collected. Following table presents the summary of the number of questionnaires distributed and collected in the villages of Lahore.

Name of area	Questionnaires		Response Rate (%)
	Dropped	Collected	
Barki	100	90	90%
Munawan	100	60	60%
Total	200	150	75%

Table 1: Response Rate for the survey

### 3.3. Measurement

The variables pertaining to personal information are gender (male or female), age, education and occupation. For flow of the instrument the names of respondent had also been asked. The age further classified into various categories. The usual occupation in rural areas (clerk, farmer, manager and housewife) is used in this study.

### 3.4. Results

#### 3.4.1. Gender of Respondent

Total number of respondents for the survey is 150. In this sample the representation of males is 67% whereas the female representation is 33%. Participation from the male respondents is more than the females. This division of having more male than females for questionnaire filling is not done purposely.

Sex	Representation	Percentage
Male	101	67 %
Female	49	32 %

Table 2: Gender of respondents

#### 3.4.2. Age of Respondent

The age group is divided into six segments. The age of the targeted respondents is from 18 years to older. The first age segment is from 18 to 24 years of age, 13.33 percent of respondent's falls in this category. Second segment is from 24 to 34 years of age, 27 percent of respondents fall in this segment third segment is from 35 to 44 years of age, 33.33 percent of respondents fall in this category. While fourth segment is from 45 to 54 years of age and 22 percent of respondents fall in this category. Fifth segment is from 55 to 64 and 4 percent respondents' fall in this category. So the percentage of the third age group is highest.

Age groups	Number of respondents	Percentage
18-24	20	13%
25-34	41	27%
35-44	50	34%
45-54	33	22%
55-64	6	04%
65 or older	-	-
Total	150	100%

Table 3: Age of respondents

**3.4.3. Qualification of Respondent**

Qualification of respondent is shown in the figure 1. The department is divided into nine categories. They include SSC, HSSC, BA/BCOMM, BBA, MA, MBA, MS, PhD and other. The category titled as other includes people who are below ssc or not educated at all. This figure shows that most of the respondents are undergraduate and fall in the category of ssc and hssc. Few respondents are highly qualified which is obvious because this data is gathered from rural and least developed areas of Pakistan.

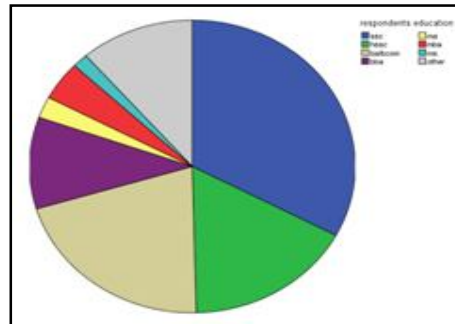


Figure 1

**3.4.4. Occupation of Respondent**

Most of the male respondents fall in the category of farmers and clerks while female respondents are mostly housewives. This data is collected from rural areas therefore mostly respondents have agriculture base. Some of the respondents are associated with the dairy farming. Women in these areas tend to be housewives. The figure 2 shows that illiterate or relatively less educated people who are related to clerical jobs and farming are less inclined towards internet banking reason being its complicated.

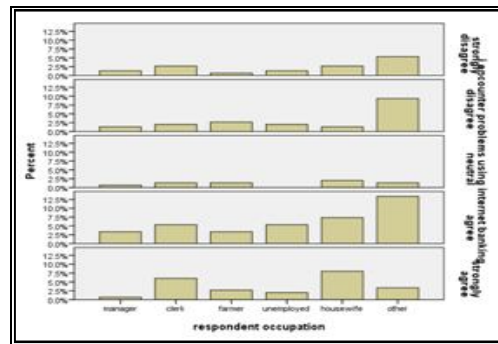


Figure 2

**3.4.5. Frequency of using Internet Banking**

People in the rural areas of Pakistan face problem while using internet banking. This research shows that they find it problematic to use for some reasons. The frequency of using internet banking regularly is very low in the rural areas of Pakistan because of some barriers the dwellers perceive. There are some technological and psychological barriers which are considered as responsible of low adoption rate of internet banking among rural dwellers. The most important technological barrier is internet services. People don't have access to internet in rural areas of Pakistan.

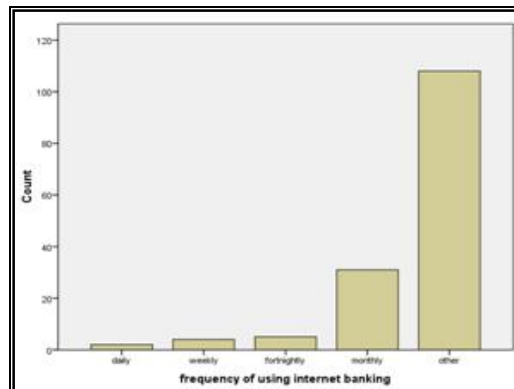


Figure 3

#### 4. Conclusion and Recommendations

The rationale behind this research was to investigate the perceived barriers in adoption of internet banking among bank customers of rural areas and to recommend certain ways through which these barriers can be curtailed. This paper also examined how different demographic conditions respond towards these barriers and discovered that security, privacy and high associated risks are drastically perceived barriers. These are considered as psychological barriers which result due to lack of perceived value of internet banking and lack of knowledge about system. The research shows that customers perceive more value and satisfaction in conventional branch banking system. Respondents complain for lack of internet access, irrespective of demographic characteristic. Now as far as the eventual introduction of internet banking facility to the rural areas is concerned then following should be the events:

- For banks to introduce technology of any variation within a close-minded setup the first step is to spark curiosity, which in turn attracts inquisition, thereby eventual flow of knowledge.
- Introduction of Internet facility and computers (preferably a bank owned internet café for the gradual enlightenment of curious locals who will act as a seed and medium of better approach)
- A rural man would prefer a human teller since for him it is more normal and friendlier due to his simplistic and trusting nature. It's better if banks educate people about machines being friendlier than human tellers.
- Due to the lack of fundamental lack of knowledge and trust issues the rural user might never approach a machine and would rather tryout thousands of dishonest tellers with eventual losses to make him permanently detached from banking as it is.
- Machine however needs to be very user friendly and helpful for him to become aquatinted and gradually develop a relation but that comes under the Applied Sciences Division.

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