OPPORTUNITIES AND CONSTRAINTS IN EXPENDING E-BANKING IN DEVELOPING COUNTRIES

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Abstract
The objective of study is to find out the prospects of adoption of E-banking in developing countries like Pakistan. The study is based on the questionnaire pertaining to different variables that affect the adoption of E-banking in the developing countries. These variables are mainly categories into three main variables. These variables are bank variables, IT variables and customer variables. These all variables affect the adoption of E-banking in the developing countries. The 100 Nos respondents were taken randomly. The study is proved with the help of descriptive statistics and simple linear regression method. Customer variables include demographic, age, education, monthly income; saving and family size. IT variables include computer and internet. Bank variables include trained staff, service efficiency. The literacy level, access to IT facilities and appropriate infrastructure may be provided to banks for boosting up E-banking expansion in developing countries. Our conclusion leads to successfully find out opportunities and constraints in the adoption of E-banking in the developing countries.

Keywords: Opportunities, Constraints, E-banking, Variables of E-banking.

Introduction:
A study pertaining to opportunities and constraints in expending E-banking in Rawalpindi/Islamabad area, Pakistan was conducted. The objective of study was to determine the prospects of adoption of E-banking in Rawalpindi/Islamabad. The study was based on a questionnaire pertaining to Bank variables, IT variables and customer variables that affect E-banking. The 100 respondents were taken randomly. The Bank variables, building, trained Staff;
service efficiency all affected the adoption of E-banking by the customers. The IT Variables viz access to computers, Internet, online banking and ATM facility were determinant factor in adoption of E-Banking. The customer variables viz age, education, Income and saving of people, all affected growth of E-banking. The younger people with age less than 36 years opted to E-banking more readily than older people. The education level was important variable but paramount important variables were income / saving of the customers, Higher the income higher the degree of adoption of E-banking. This may be postulated from the study conducted that there is great potential /opportunities in adoption of E-banking in Pakistan, provided the constraints are redressed properly. The literacy level, access to IT facility and appropriate infrastructure may be provided to bank for boosting up E-banking growth. The above study has been proved with the help of descriptive statistics and simple linear regression method.

Objectives:

The objectives of study were:-

1. To determine the opportunities of adoption of E-banking in Rawalpindi/ Islamabad area.
2. To determine the constraint in adoption of E-banking in Rawalpindi/ Islamabad area and devise ways and means for redresser of constraints encountered in adoption of E-banking.

Literature Review

The global economy has been changed into an informative society at present. The conventional banking sector is undergoing radical transformations because of technological development in the field of telecommunications and information technology. The financial sector as key components of the global economy has set in motion a new delivery channels for banking such as ATM, internet banking, tele banking, PC banking and many other related items as modern banking no more exits between four walls of a bank. In USA and UK in 1960s E-banking was prevalent for electronic fund transfers and credit card facility. At present 40% bank
transaction are performed through internet (Furst, Lang and Nolle (2000) reported in developed
countries that in 1999, 20% national banks offered internet banking to its customers. Almost all
larger banks offered internet banking while only 7% of small bank provided the internet banking
facility. They further narrated that institutions with internet banking had higher profit than
institution with non internet banking. Furthermore, the banks with higher profit are likely to
adopt internet banking readily than banks with small profit. In developing countries the E-
banking is still in infancy however there are high potential and intense opportunities for
introduction of E-banking in these countries. Rajesh kumar (2007): Narrated that in the usage of
internet banking gender factor, income factor and education factor has a pivotal role. These areas
were not enriched with research because main focus was on technology rather than on people.
This research has been proved with conceptual theory that stated if skills were upgraded then
there will be more courage to adopt e-banking by the customer. Inhibitory elements like,
religion, trust, price, culture, education, secrecy may have less effect on consumer mind set
towards adoption of e-banking. Samane & Monadjemi(2011): They revealed the factors that
affect the adoption of e-banking in the Iran. According to their research four factors usage,
accessibility, speed and secrecy affect the adoption of internet banking. To check the acceptance
level of internet banking in the Iran, it has also been observed in this paper whether usage of e-
banking in Iran was constrained by the technology based on various factors. These factors were
advertisement campaign, various age groups of the consumers, education level, monthly income
and usage of internet by the consumers. It was also observed that old people low literacy level
have more resisted to adopt e- banking. Sherah Kurenia, Fei Peng,Yi Rao Liu(2010): stated that
there were major issues that affected the expension of e- banking which were proper legal
procedure or system, lack of technology development with regard to China e- banking
development requirement. There were also fewer trends to accept the banking by the people of
China. Batin & Kamil (2010) narrated that low literacy factor and IT infrastructure factors were main hurdles with regard to adoption of e-banking by the people of Bangladesh. Required security arrangements were not provided by the banks. Literacy level is low in Bangladesh due to this reason people are not technology familiar. In addition to that the people who are literate, a portion of them have computer phobia. So, it is difficult for them to build up their trust on e-banking services. There should be enhancement in the computer or literacy for the purpose of build up confidence on e-banking in Bangladesh. To boost up the literacy level in the country the Government of Bangladesh has taken many initiatives. In the Bangladesh people are not well aware regarding e-banking. They do not know the power of technology. So, due to this reason they are unable to enjoy better banking operations. E-banking can offer many other things such as to reduce administrative and operational cost. They may increase more new markets. These elements are more beneficial for the e-banking competitiveness. To conclude it Bangladesh should avail the opportunity of e-banking (Salimon-2006) narrated that in Nigeria modernization of banking sector is in process and in 1993, Central bank of Nigeria introduced payment card for transactions. The ATMs were used for money drawal, checking of account balance and payment of utility bills. In 2004, Central bank of Nigeria provided guidelines on E-banking that included information about ATMs, credit card and debit cards. Polatoglu and Ekin (2001) stated that in Turkey banking sector has adopted technological innovation like E-banking and providing a number of services to the customers. At present internet banking of paramount importance to the economy of Turkey. Sohail and Shanmughaus (2002) conducted a study pertaining to customers preferences for E-banking in Malaysia and the factors that affect E-banking. Among the demographic variables age and educational qualification of customers of E-banking and conventional banking had little effect, however monthly income was of pivotal importance in adoption of E-banking, higher the income, more the adoption of E-banking by the customers.
They also elaborated that accessibility of internet and awareness of E-banking was main constraints in adoption of E-banking in Malaysia. Bolongkikit (2006) studied E-readiness index of SAARC countries and inferred that there is position trend in e-adoption in all SAARC nations, while Pakistan had highest change level of 15 during 2003-2004. Ahmad (2006) reported that internet banking in Pakistan started in year 2000, when the government laid concentrated emphasis on Information Technology (IT). He illustrated that many factors are affecting the adoption of E-banking in Pakistan. Among these three variables are most important: these variables are infrastructure, consisting of telecommunication, power, electronic devices and buildings, service variables comprising of service structure and business models and fairly application of database management system. In Pakistan internet is mostly use in cities and this may be a big constraint in adoption of E-banking in Pakistan. Economic intelligent unit (2006) carried out e-readiness ranking survey and reported that all countries improved e-readiness score in 2006 compared to 2005. The developing countries have high e-readiness scale than developed countries. The gap between the best and rest has narrowed, Pakistan attained 67 position with score 3.0/10 in 2006 compared to 2.93/10 in 2005. It indicates that there is great opportunities for adoption of E-banking in Pakistan.

**Importance of E-Banking in Developing Countries like Pakistan:**

The E-banking is rapidly replacing conventional banking bounded by four walls in developed world. In developing countries like Pakistan, E-banking is still in infancy. There are 7000 commercial bank branches in Pakistan, out of which 90% branches are in urban areas. The National Institutional Facilitation technologies (NIFT), reported that an automated cheque clearing house, was operating in 14 cities. The ATM and E-banking use is gaining momentum and most of the bank established ATMs system. The E-banking and internet banking increase
will open avenue of online banking. The number of customers using ATMs has increased in recent years and E-banking offered more alternative and choices to customers.

**Research Model & Variables:**

In this study, I have included the following variables which impact expending of E-Banking. Although E-banking is on the increase, yet it is confronted with a number of constraints and is affected by variables like, IT variables, Bank Variables and Customers Variable and results of all these variables determine the E-banking expending available in a specific region/area.

i) **Customer Variable** includes demographic, age, education, monthly income, saving, Family size.

ii) **IT Variable.** Includes computer, Internet.

iii) **Bank Variable** includes trained staff, services Efficiencies.

The E-banking model is depicted in the figure below:-
Hypothesis:

Hypothesis is as under:

Ho. E-banking can not replace conventional banking.
H1. IT variable have positive impact on E-banking.
H2. Banking variable have positive impact on E-banking.
H3. Customer variable have positive impact on E-banking.

Research Methodology:

To study opportunities and constraints in adoption of E-banking in Rawalpindi/Islamabad area, a survey was conducted. The survey was based on a comprehensive questionair, comprising of bank, IT and customer variables. The IT variable includes computer and internet. The customer variables include age, education, income, family size and savings. The bank variable includes trained staff and service efficiencies. E-banking growth is dependent variable where as customer, IT & bank variables are independent variables. In all 100 respondents were interviewed in persons. The respondents were taken at random. The data collected was subjected to statistical analysis and inferences were drawn according. The statistical method used was Regression that show impact of variables on the E-banking growth.

In this research methodology SPSS software was used. The constraints in adoption of E-banking were highlighted and ways and means were suggested to overcome these constraints and opportunities of E-banking were explored in Rawalpindi/Islamabad area was used.
Table 1: Description of Customer, Bank and Information Technology Variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Mean</th>
<th>S/Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Customer Variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Age of customer in years</td>
<td>36</td>
<td>12.71</td>
</tr>
<tr>
<td>Education</td>
<td>Years of Education</td>
<td>14</td>
<td>5.73</td>
</tr>
<tr>
<td>Income</td>
<td>Per month income in rupees</td>
<td>27343</td>
<td>12500</td>
</tr>
<tr>
<td>Family Size</td>
<td>Number of family members in the house</td>
<td>5</td>
<td>6.30</td>
</tr>
<tr>
<td>Savings</td>
<td>Per month savings in rupees</td>
<td>5000</td>
<td>2300</td>
</tr>
<tr>
<td><strong>B. Bank Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trained staff</td>
<td>Number of trained persons in the bank</td>
<td>2.88</td>
<td>3.76</td>
</tr>
<tr>
<td>Services Efficiencies</td>
<td>1 if service efficiencies, 0 otherwise</td>
<td>0.53</td>
<td>0.62</td>
</tr>
<tr>
<td><strong>C. Information Technology</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td>1 if customer have computer, 0 otherwise</td>
<td>0.64</td>
<td>0.44</td>
</tr>
<tr>
<td>Internet</td>
<td>1 if customer uses internet, 0 otherwise</td>
<td>0.51</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Source: Own calculations.
### Table-2: OLS Regression Results:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Customer Variables:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (Number of years)</td>
<td>-0.009</td>
<td>-1.71*</td>
</tr>
<tr>
<td>Education (Number of years of schooling)</td>
<td>0.019</td>
<td>1.99**</td>
</tr>
<tr>
<td>Income (Rupees per month)</td>
<td>0.021</td>
<td>2.13**</td>
</tr>
<tr>
<td>Monthly Transaction</td>
<td>0.023</td>
<td>0.69</td>
</tr>
<tr>
<td>Family size (Number of family members)</td>
<td>0.081</td>
<td>2.61***</td>
</tr>
<tr>
<td>ii) IT variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td>0.024</td>
<td>2.31**</td>
</tr>
<tr>
<td>Internet</td>
<td>0.036</td>
<td>2.66***</td>
</tr>
<tr>
<td>iii) Bank Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trained Staff</td>
<td>0.018</td>
<td>1.65*</td>
</tr>
<tr>
<td>Service Efficiency</td>
<td>0.006</td>
<td>0.84</td>
</tr>
<tr>
<td>Constant</td>
<td>0.599</td>
<td>1.69*</td>
</tr>
<tr>
<td>Number of respondents</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Note *, **, *** indicates that results are significant at 10, 5 and 1 percent respectively.
Results and Discussion:

The result pertaining to opportunities and constraints in expanding E-banking in Rawalpindi/Islamabad region of Pakistan are discussed in the following text.

Customer Variables:

Customer variable has overall positive impact on e-banking growth except age that has negative and significant impact on enjoying E-banking facility i.e. mean aged people have mostly enjoy the conventional banking as compared to young people. Education has positive impact on E-banking mean mostly educated persons are enjoying the E-banking facility and vice versa. The income have positive and high significant impact mean that more the household or individual income more is the probability that he will be using E-banking and vice versa.

This study was conducted in line with finding for Sohail and Shanmughan (2002) in Malaysia. They observed that younger generation relatively of less age was using computers and avail E-banking facility compared to old people. The higher the literacy rate, more the prospectus that customers will adopt E-banking. Same has happened in Rawalpindi/Islamabad area of Pakistan, as in these cities people are mostly literate; hence 56% had opted E-banking in a period of nine year since advent of E-banking in year 2000 in Pakistan. Sohail and Shanmughan (2002) also inferred that people with more income are high user of computers and also avail E-banking facility readily. They further elucidated that income was the pivotal factor in adoption of E-banking. The results of present study are also confirmatory to those of Abid and Noreen (2007) of COMSATS institute of information technology that most of E-banking account holders were of younger age group, 18-30 year old. They also reported that lack of awareness online banking was main impediment in adoption of E-banking in Pakistan.

IT Variables:

As far as IT variables are concerned, the computers have positive and significant impact on using the E-banking facility, while internet impact is also positive. The data in table
reveals that IT Variables are important in expansion of E-banking in Pakistan. However, IT facility in Pakistan is still a distance task, as 2/3 population live in rural areas with low literacy rate that is main constraint in expansion of E-banking specifically in rural areas. It is assumed that E-banking and E-commerce and computer intervention are mostly business of urban area and rural areas have little to do with these innovated banking services. Moreover mostly 90% banks are located in cities and there is not much banking in rural areas. Kazmi (2002) also narrated that main constraints in E-banking was slow penetration of computers in Pakistan. The Government of Pakistan in 2002 introduced electronic transaction ordinance that provides legal cover to digital signatures and documentation that curtail the risk associated with use of electronic medium of business. The electronic transactions in world were trillion of dollars in 2004 and Pakistan is alive to these global phenomena and has focused his efforts in development of IT in the country and as such opportunities of E-banking are expanding day by day. At present banking sector is undergoing radical transformation and easiness, quickness and cheapness are ultimate motives of E-banking that will propagate the spread of E-banking in Pakistan. Ahmad (2006) reported that telecommunication and power are main component of any digital intervention. The use of E-banking in microfinance has great opportunities in Pakistan especially in promoting the small scale agriculture and industrial units. The sustainability of these units will provides employment opportunities and will boost up country economy to considerable degree.

**Bank Variables:**

The bank variables viz trained staff and service efficiency are positive and highly significant, mean more trained the bank staff and more efficient are the facilities, more is the probability that customers will be using or enjoying the E-banking facility. In expansion of E-banking the trained staff is prerequisite. Since the advent of E-banking in 2000 in Pakistan the E-
banking is on the increase everyday but not at the rate it ought to be, because lack of trained staff. The efficiency of untrained staff will be low and may be impediment in growth of E-banking. The awareness pertaining to E-banking is other constraints in expansion of E-banking. The awareness campaign may be arranged by the banks, so that common customers get acquaintance of E-banking Business. In brief, all the variables viz bank; IT and customer affected the expansion of E-banking. The Government of Pakistan has already taken steps toward informative society. However the task of introduction of E-banking in Pakistan is gigantic, as 2/3 people live in rural areas which are mostly illiterate and even not conversant to conventional banking. Also in rural areas only 10% bank exist, remaining 90% are located in urban areas. The education, access to computer, internet and appropriate awareness about E-banking will guarantee expansion of E-banking in the country. Bank should also provide architecture and infrastructure for E-banking. The customers should also be demonstrated and trained in use of E-banking facility. It is high time that Government, banks and customers must realize that without adoption of innovative technology such as E-banking, we will lag behind the rest of world that is not to be opted in any way. The opportunities for expansion of E-banking in the country may be explored to full extent, so that Pakistan may play active role in global revolutionary economy of the world.

Conclusions/ Suggestions:

In this study, impact of customer, IT and bank variables on e banking growth has been analyzed through application of simple linear regression method and these variables has positive and significant impact on e-banking growth. Study pertaining to constraints and opportunities in expansion of E-banking in Rawalpindi/Islamabad was an exploratory study. In future comprehensive study in this regard may be conducted specifically focusing on rural areas.
The literacy level, access to IT facility and appropriate infrastructure may be provided to banks for boosting up E-banking growth. Trained staff for adoption of e-banking is very much important. In this way e-banking can perform a pivotal role in the economic development of the country. The study led to the conclusion that there is great opportunity for growth of E-banking in Pakistan; however the concerted efforts are needed for removal of constraints that encounter in expansion of E-banking.
References:

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