

IMPACT OF USER IT AND INTERNET SKILLS ON ONLINE BANKING, INPUT TO INNOVATIVE BANKING STRATEGIES

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-Abstract-

Online-banking is now widely being introduced by banks. This Strategic move is supported by aim to reduce branch/resources costs and offer more convenience to the consumers. Alongside users are becoming more frequent in IT /internet day-by-day. This provides good match to the success of Online-banking.

Employee's skills and user's skills were also considered by scholars to see the effect on adoption of online banking. Author has found that these user skills were not standardized. Author tried to fill this gap by using Eurostat classification of skills in terms of user's Computer and internet skills [Appendix. 1]. The objective of this study is threefold, thus understanding the user perception about fear of online theft/misuse, Complexity and effect on individual's efficiency by using online banking.

A questionnaire has been sent to users and results thus verified 02 of 03 hypothesis. Despite higher level of skills and experience, users have concerns with the security and complexity of the method. The results are analyzed in a simple graphical fashion in order to provide quick understanding to the reader.

Concluding, despite certain limitations, this study gives value to the literature and opens new research horizons for online banking strategies. It provides a common criterion for understanding user skills and their perceptions about the application/usability of online banking using EU classification. Consequently counter actions can be taken by the banks to satisfy users concerns and improve the structure of online banking.

Key words: *business, ICT, online-banking, strategy, behavior, innovation*

JEL Classification: M00, M15, M19, M39, O31

1. INTRODUCTION

In the next sections, we will briefly look into the history and will see the transformation in the banking industry from traditional or retail banking to the online and mobile banking due to various factors including ICT introduction. We will consider only online banking in this study. We will also see the drivers which motivated the banks to adopt online banking and possible critical challenges and important aspects to be considered while proposing innovative solutions to the customers.

Online banking is one of the great outcomes of the ICT applications in the banking industry. This kind of banking solution provides more autonomy to the client to operate upon his convenience any time and does not require his presence in the branch, as well as it gave tremendous cost reduction to the banks by decreasing workforce and branch expanses.

Thanks to increasing use of computer and internet, the individual skill level is constantly increasing day by day and thus there is a huge potential for banks to capture online banking market and get more clients as well as market share.

According to Eurostat data, banking is one the top users of ICT applications.

As the traditional banking services do not require high level of computer or internet skills from users and in this respect it is identified that the appropriate skills and level of trust of the user are of vital importance in the true success of the adoption of online banking.

1.1. Literature Review

Globalization, Deregulation, and Information Technology are the main drivers of continuous competition among the banks and provide them open opportunities for proposing or delivering innovative solution to the clients for their progress and survival in the banking Industry and encourages their effective entry to the new markets (Christopher P. Holland, et al., 1997:418).

Christopher P. Holland, et al. also discussed “Spiral of Decline” which is due to factors of Entry or creation of new Competitors, New Innovative strategic moves from the existing competitors, Disintermediation and finally the customer’s needs and expectations which are always changing and they expect ease, autonomy and security in the daily operations. (Christopher P. Holland, et al., 1997:423)

Telecommuting and Bank process reengineering are considered to be new strategic responses to rapidly changing banking market. Further, ICT is the main

driver for banks to compete and survive through innovation in a dynamic business environment. (Adeosun, O.O. et al., 2008:135)

Banking Automation is the tool to market survival. (R.K.Uppal, 2010:029).

Online banking is considered novel and to be understood by traditional banking channels but indeed is growing most of all other business areas. (Adel M. Aladwani, 2001:213)

Online banking is mainly initiative from bank top management having several objectives in mind such as cost reduction, improving competitive positioning, business image etc. (Adel M. Aladwani, 2001:217)

(Adel M. Aladwani, 2001:213) also discussed various Challenges such as Spread and proficiency of computer and internet and Internet security for the successful adoption of online banking.

Customer's prior computer usage experience is vital for online banking usage. (Heikki Karjaluo et al., 2002:269)

Relationship with customer while online transaction is a great challenge for banks. (Avinandan Mukherjee and Prithviraj Nath, 2003:5)

It is important for banks offering online banking to recognize the user innovativeness related to internet. (Walfried M. Lassar et al., 2004:176)

Walfried M. Lassar et al. also made various hypotheses related to user behavioral aspects (including general innovation behaviors, internet/computer proficiency and various demographic aspects etc) towards online banking. Walfried M. Lassar et al., 2004:181-187)

It is also found that prior computer experience and expertise have indirect effect on perceptions of the users. (Petrus Guriting and Nelson Oly Ndubisi, 2006:6)

1.2. Conceptual Framework and Hypothesis

ICT application in the banking sector gives competitive advantage to the banks by means of cost reduction, efficient data management, analysis, safety, recovery disaster management etc as well as it improves the efficiency of the user and reduces its traveling and waiting times and gives more autonomy.

As the online banking is a trade between client and the internet without being physically present in the branch in front of bank employee, thus it is a bit sophisticated in the sense that it requires skills of the user to successfully

accomplish the task and also needs trust and faith of the customer about safety of money and privacy.

We do acknowledge that the drivers discussed in the earlier literature do have their importance in the success of the online banking. In the literature discussed so far, user skills are discussed very generically and different authors have their own ways of addressing these skills. Moreover these skills are not clearly defined to be measured or assessed. In this study, it is tried to make skills more defined and assessable for the users by using Eurostat e-skill classification. We will focus on the user's computer and internet skills as being the essentials of online banking.

Individual e-skills are studied from Eurostat database considering only EU15 countries. (web reference 1). The data showed an increasing trend all over the Europe with some limitation of data in few countries. As a whole, in Europe there is positive trend of increase in the individual computer and internet skills. It helped us to assume that as skills will be increasing there will be more potential for online banking.

Three dimensions of the utilization of online banking such as fear of potential misuse (mistrust of user), Complexity and Effect on efficiency of individuals were studied in light of user's skills.

Following hypothesis are made based on the discussion,

Hypothesis 1: Computer Skills & Internet Skills have positive influence on the Efficiency of user while using Online Services (higher the Skill Level of User, Higher will be utilization and efficiency and vice versa)

Hypothesis 2: Computer Skills & Internet Skills have negative influence on perceived Complexity of Online Services (higher the Skill Level of User, lower will be the perceived complexity of the online banking and vice versa)

Hypothesis 3: Computer Skills & Internet Skills have positive influence with user's fear of potential misuse of Online Services (Higher the skill level, higher is the fear to be misused and vice versa)

2. METHODOLOGY, RESULTS AND DISCUSSION

2.1. Methodology

For the validation of above mentioned hypothesis, a research survey was conducted. An Online questionnaire [web ref.2] was sent to various contacts and their results were analyzed after proper treatment (The replies coming from residents outside EU 15 countries were excluded).

2.2. Results

General Summary of the Survey Results

Fig-1: Individual e-Skills – Survey results

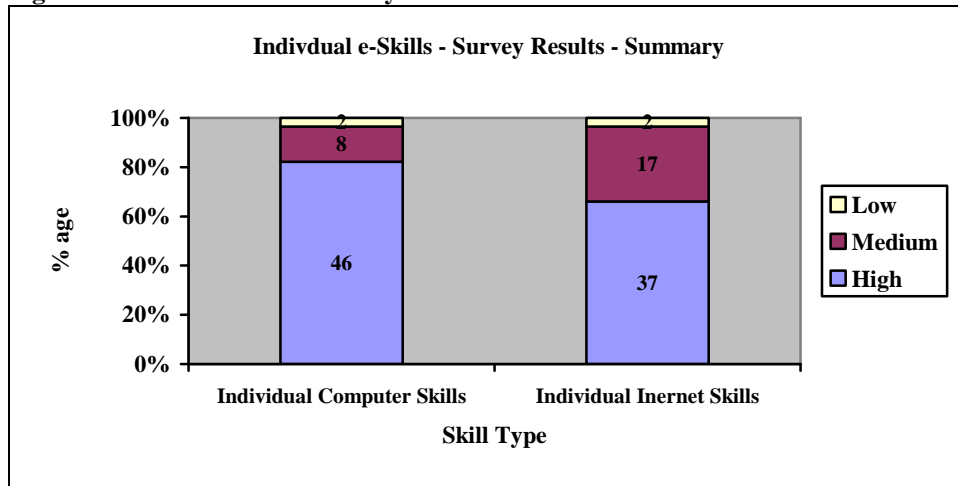


Table 1: User's Computer skills and their feedback

User's Computer (IT) Skills – Survey results				
Potential Misuse Fear	Fear of Potential misuse	High	Medium	Low
	Yes	41	7	2
	No	5	1	2
Complexity of Online Banking	Complexity	High	Medium	Low
	Not Complex	30	7	0
	Complex	16	1	2
Efficiency of Online Banking	Efficiency	High	Medium	Low
	Improved Efficiency	42	7	1
	Did not Improved Efficiency	4	1	1

Table 2: User’s Internet skills and their feedback

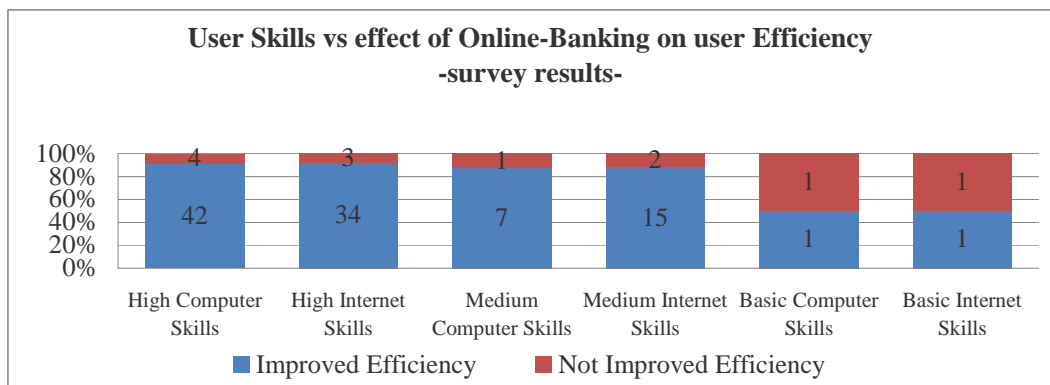
User's Internet Sills – Survey results				
Potential Misuse Fear	Fear of Potential misuse	High	Medium	Low
	Yes	33	15	2
	No	4	2	2
Complexity of Online Banking	Complexity	High	Medium	Low
	Not Complex	26	11	0
	Complex	11	6	2
Efficiency of Online Banking	Efficiency	High	Medium	Low
	Improved Efficiency	34	15	1
	Did not Improved Efficiency	3	2	1

2.3. Discussion

The Analysis of the data verifies two hypothesis while one could not be verified.

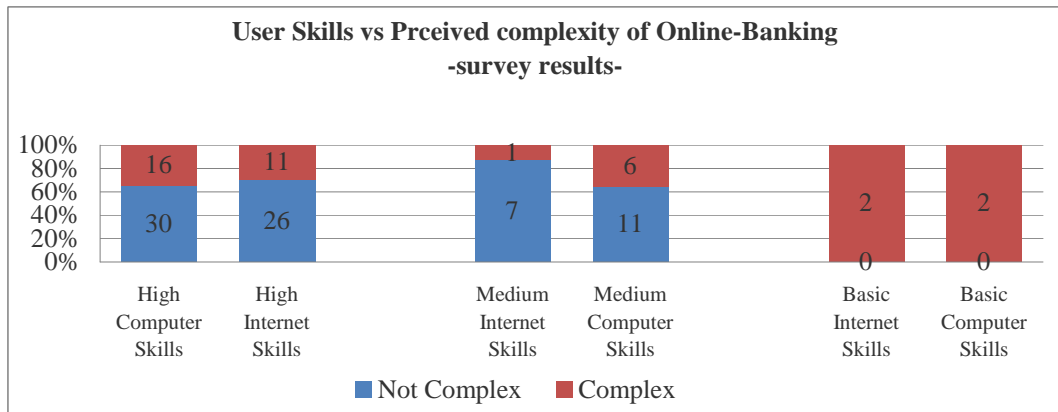
Hypothesis 1: It proves that with the increase of individual skill level, the efficiency of user is increasing.

Fig-2: User Skills vs effect of Online-Banking on user Efficiency (survey results)



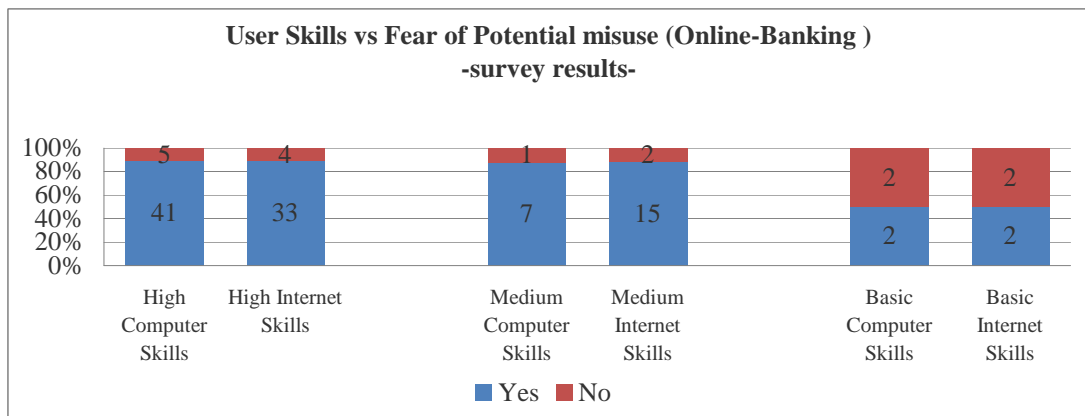
Hypothesis 2: It does not give a linear relationship among user skills and as was assumed. It could not be proved. There is a mixed feedback about complexity of online banking regardless of user skill level.

Fig-3: User Skills vs Perceived complexity of Online-Banking (survey results)



Hypothesis 3: It verifies completely that users having higher skills are more worried about the potential misuse.

Fig-4: User Skills vs Fear of Potential misuse with Online-Banking survey results



3. CONCLUSION

User skill level could be a micro driver for the banks to devise their technological strategies. There is a lot of potential for the individuals to improve their Computer /Internet skills; hence there is tremendous opportunity for banks to go online.

Therefore these kinds of solutions must be designed by considering individual skill levels. Online banking should not be very simple that it does not give value to highly skilled user and also it should not be so complicated so that the users with medium and Low level are unable to get benefits.

Also trust and confidence of the user is inversely proportional to the level of complexity of the services. If we need more security then it is obvious to have more check and balance while using it. In doing so the users with Low skills would be in trouble.

It is also suggested in literature that banks should initiate training courses explaining internet and as well as computers. (Heikki Karjaluoto et al., 2002:269). The author would like suggest further to the banks to initiate orientation training courses for their existing and potential clients and explain functioning of online banking and level of protection and security measures taken.

3.1.Limitations and Future Work

Due to small sample size, the survey results could not verify all the skill distribution as it was indicated by Eurostat data. Also very less data is available for the users with medium and Low skill levels. This Study could be the first step to carry out such analysis and further episodes may fine tune it.

Future sampling is suggested to be segmented in terms of demographic (age, sex, income, occupation, education etc) and geographical distribution. Equal Sample sizes should be selected and comparative study should be done.

A study under the work done by the Hofstede or Schwartz could be another step ahead to this study.

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Appendix 1: EU Classification of individual's Basic e-skills (Eurostat)

Note 1: The Individual Computer Skills: As per EU Classification (Eurostat)

[tsdsc460] - Individuals' level of computer skills - individuals aged 16 to 74

- 1-copy or move a file or folder;
- 2-use copy and paste tools to duplicate or move information within a document;
- 3-use basic arithmetic formula (add, subtract, multiply, divide) in a spreadsheet;
- 4-compress files;
- 5-connect and install new devices, e.g. a printer or a modem;
- 6-write a computer program using a specialized programming language;

Note 2: The Individual Internet Skills: As per EU Classification (Eurostat)

[tsdsc470] - Individuals' level of Internet skills - individuals aged 16 to 74

- 1-use a search engine to find information
- 2-send an e-mail with attached files
- 3-post messages to chat rooms, newsgroups or any online discussion forum
- 4-use the Internet to make telephone calls;
- 5-use peer-to-peer file sharing for exchanging movies, music etc.
- 6-create a web page

The user Skill level grading (for both cases) could be as follows

- Low = who can do 1 or 2 out of the above 6 skills
Medium = who can do 3 or 4 out of the above 6 skills
High = who can use 5 or 6 out of the above 6 skills