

## Electronic Banking in Bangladesh: A Quantitative Analysis

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### Abstract

*Advances in electronic banking technology have created novel ways of handling daily banking affairs, especially via the online banking channel. The acceptance of online banking services has been rapid in many parts of the world, and in the leading e-banking countries the number of e-banking contracts has exceeded 50 percent. This study investigates online banking acceptance in light of the traditional technology acceptance model (TAM), which is leveraged into the online environment. DBBL is inclined to investigate a relation between Perceived usefulness (PU), Perceived ease of use (PEU), Perceived enjoyment (PE), information on online banking, security and privacy and online banking use of DBBL consumers. The research was conducted with a survey sample (n=100). The findings of the study indicate that perceived ease of use, security and privacy and information on online banking on the Web site were the main factors influencing online-banking acceptance.*

*The analysis of this study has produced several impeccable findings that need to be dealt with proper care for improving customers' online usage. The findings are as follows:*

*Perceived ease of use, security and privacy and online information are significantly positively correlated with online banking uses of the customers. Therefore, DBBL should consider these factors when they are looking*

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*forward to increasing their online banking uses, which in turn would increase the organizational development.*

*The regression outputs suggest that perceived ease of use and security and privacy are the most essential and crucial variables that could explain variations in online banking uses. This is why DBBL should improve and give proper attention to make sure the ease of use of online banking and ensure customers' security and privacy.*

## **Introduction**

### **1. Background of the study**

Since the mid-1990s, there has been a fundamental shift in banking delivery channels toward using self-service channels such as online banking services. During the past years online banking acceptance has been rapid and currently 55 percent of the private banking customers in Finland have an online banking contract with their bank (**The Finnish Banker's Association, 2003; Nordea Oyj, 2003**). In general, Europe has been and still is the leader in online banking technology and usage (**Schneider, 2001**). By comparison, at the end of 2000 only roughly 20 percent of the US banks offered online banking services and only 20 percent of US private banking customers equipped with an internet connection used online banking services (**Sheshunoff, 2000; Orr, 2001**). By the end of 2002, about 120 largest US banks offered online banking services (**Pyun et al., 2002**). Although in recent years this number has grown rapidly, there is some evidence supporting the opposite fact that online banking acceptance is faced with problems. **Robinson (2000)** for instance found that half of the people that have tried online banking services will not become active users.

An interesting and notable difference between US and European banks is that US banks are not allowed to have a vast bank branch network covering the whole country (**Pyun et al., 2002**). Thus, online banking services as well as ATMs have fostered competition between banks in the USA.

Online banking in this study is defined as an Internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments. Therefore, banks' Web sites that offer only information on their pages without possibility to do any transactions are not qualified as online banking services. Dutch-Bangla Bank Ltd (DBBL) has been one of the prominent banks among the commercial banks in Bangladesh. Now, they want to explore the

technological advances to deal with the customers as to why the management is lingering to go for online banking.

### **1.1 Problem statement**

In today's banking environment, Thai banks are continuously looking to making a better use technology by attempting to move low-value transactions away from the branch counter to ATM networks and to the internet and telephone banking (Chudasri, 2002). As a consequence, most commercial banks have launched web sites to offer online services to bank customers. They are beginning to use the internet as a new distribution channel in the belief that the future of service lies in electronic banking. This is facilitated by the Thai government's support for the economy by moving it towards electronic commerce as laid out in the Ninth National Economic and Social Development Plan (Boonruang, 2000). DBBL is an upcoming bank with huge potential. The bank has recently introduced the internet banking in all its branches. The management now wants to decide whether the clients have accepted and understood the online banking system or not. Keeping this objective in view, they have decided to go for a relational research on the online banking use of the existing customers (clients) of DBBL.

In this study, the researchers examine the relationship between Perceived usefulness (PU), Perceived ease of use (PEU), Perceived enjoyment (PE), information on online banking, security and privacy and online banking use of DBBL customers.

### **1.2 Purpose of the Study**

The purpose of this study is to increase our current understanding of the factors that influence online banking acceptance in the light of the technology acceptance model (TAM) (Davis *et al.*, 1989; Mathieson, 1991; Davis and Venkatesh, 1996). More precisely, online banking acceptance will be studied from the information systems acceptance point of view referring to the idea that customers are using bank's information system (online banking service) directly and hence more knowledge on the factors that affect information systems adoption is needed in order to better understand and facilitate the acceptance.

### **1.3 Limitations of the Study**

This paper presents an initial phase of a sustainable research program and as such has limited itself in terms of research design.

**Firstly**, non-probability sampling method is adopted for the research, meaning that statistical inferences regarding the population may not be made accurately. **Secondly**, data collection was confined to only one DBBL branch of Dhaka city because of the short time span of the research. Therefore, a significant number of customers were overlooked whose belief could have been imperative for the study in the process. **Thirdly**, it was time consuming and spontaneous respondents for the questionnaires developed were hard to find. Therefore, the data collection procedure almost resembled to be an interview session on some occasions. **Again**, there was limited secondary literature available on the topic that restricted the researchers to explore the sector related to it.

## 2. Literature Review

Information technology adoption and actual usage of IS (Information System) in the workplace has been a central concern to many researchers and practitioners due to its importance in technology diffusion. In the last two decades, a number of studies have provided some theoretical framework for research in the acceptance of information technology and information system (IT/IS) (Ajzen, 1985, 1991; Davis, 1989; Davis *et al.*, 1989; Mathieson, 1991; Moore, 1987; Taylor and Todd, 1995). Among them, the technology acceptance model (TAM) is believed most robust, parsimonious, and influential in explaining IT/IS adoption behavior (Davis, 1989; Davis *et al.*, 1989; Igbaria *et al.*, 1995; Mathieson, 1991). TAM was proposed by Davis (1989) and introduced two important constructs – perceived usefulness and perceived ease of use.

### 2.1 Perceived Usefulness

Perceived usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her job performance (**Davis, 1989**). As we commented above, the perception that users will want to perform an activity “because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions” (**Davis *et al.*, 1992**). In applying TAM to student use of the internet, **Anandarajan *et al.* (2000)** found that perceived usefulness was related to time spent on the internet. Perceived usefulness in the TAM model originally referred to job related productivity, performance, and effectiveness (Davis, 1989). This is an important belief identified as providing diagnostic insight into how user attitude toward using and intention to use are influenced – perceived usefulness has a direct effect on intentions to use over and above its influence via attitude (Davis *et al.*, 1989; Davis, 1993; Taylor and Todd, 1995). Incorporating concepts

used in expectancy theory, Triandis (1980) proposed that an important factor influencing behavior is the expected consequences of the behavior. In the context of user acceptance, the concept of perceived usefulness is, therefore, expanded to include both near-term consequences and long-term consequences. Improvement in productivity, effectiveness, job performance or satisfaction is considered attributes of near-term consequence. Triandis' explanation for near-term consequence is equivalent to the perceived usefulness in TAM. Long-term consequence refers to consequential result in one's career prospects or social status. This definition of long-term consequence reflects the concept of image in Rogers' (1983) diffusion of innovations. Rogers argued that the desire to gain social status is a most important motivation for adopting an innovation. Decomposing usefulness explicitly into near-term and long-term provides more insightful information in understanding user perception of usefulness.

Along this stream of thought, Chau (1996) split the construct of perceived usefulness in his modified TAM model into two parts: perceived near-term usefulness and perceived long-term usefulness. He hypothesized that behavioral intention to use a particular technology is dependent on the above two variables as well as on perceived ease of use. The empirical findings supported his hypothesized relationships between perceived near-term and long-term usefulness, and intention to use. The relationship between perceived near-term and long-term usefulness and attitude to use was not investigated here in order to simplify the model.

## **2.2 Relationship between Perceived Usefulness and Online Banking Use**

Previous research has found that perceived usefulness has a strong and consistent relationship with computer usage. For example, Davis (1989) found that perceived usefulness was significantly correlated with both self-reported current usage and self-predicted future usage. Similarly, Igarria *et al.* (1995) found that perceived usefulness has strong direct effects on system usage dimensions. Igarria *et al.* (1994) and Adams *et al.* (1992) also confirmed that perceived usefulness is positively related to system usage. A probable reason is that individuals will use computers only if they perceive that such usage will help them to achieve the desired task performance.

Perceived usefulness represents the first motivational factor influencing microcomputer usage. The importance of perceived usefulness as an important motivating factor derives from the TRA model, which proposes that perceived usefulness affects microcomputer usage due to reinforcement values of outcomes.

Adams *et al.* (1992) and Davis *et al.* (1989) report that user acceptance of computer systems is driven to a large extent by perceived usefulness. In addition, Davis (1989) found that perceived usefulness exhibited a stronger and more consistent relationship with usage than did other variables reported in the literature including various attitudes, satisfaction and perceptions measures. Other studies by Igbaria (1990), Thompson *et al.* (1991) and Robey (1979) suggest that perceived usefulness is positively associated with system usage.

Perceived usefulness influences web usage indirectly through attitude and directly through intent. TAM thus posits that perceived usefulness is influenced by perceived ease of use. A system that is difficult to use is less likely to be perceived as useful; in other words, between two systems offering identical functionality, a user will probably find the one that is easier to use more useful. Davis (1993) noted that perceived ease of use might actually be a prime causal antecedent of perceived usefulness. Nevertheless, perceived usefulness is not hypothesized as having an impact on perceived ease of use. Davis (1993) states that making a system easier to use, all else held constant, should make the system more useful. The converse does not hold, however. Furthermore, Davis (1989) stated his original TAM model where he found a stronger support of perceived ease of use construct with perceived usefulness rather than with intention to use. Again, from a causal perspective, the regression results suggest that ease of use may be an antecedent to usefulness, rather than a parallel, direct determinant of usage. These relationships have been examined and supported by many prior studies ( Davis, 1989, 1993; Davis *et al.*, 1989; Venkatesh and Davis, 1996, 2000). However, as we commented above, there is a significant body of theoretical and empirical evidence regarding the importance of the role of intrinsic motives in web acceptance and use. Researchers have become increasingly aware of the relevance of the non-extrinsic motives of use such as intrinsically enjoyable experiences (i.e. flow) in understanding attitudes and behaviors. Next, we evaluate the role of flow affecting the web-based behaviors as a highly subjective variable among individuals, and, in turn, explaining and improving the users' experience of being in and returning to the web.

### **2.3 Perceived Ease of Use**

The perceived ease of use refers to the degree to which an individual believes that using a particular system would be free of physical and mental efforts (Davis 1989). In TAM, similar to TRA, an individual's belief determines the attitude toward using the system and, in turn, the attitude develops the intention to use.

Finally, this intention influences the decision of actual system usage. Especially, with the proliferation of the internet and e-commerce, researchers have adopted and adjusted TAM to demonstrate the empirical evidences of TAM in the new World Wide Web (WWW) context. Perceived ease of use refers to the degree to which the user expects the use of the system to be user friendly. Since effort is a finite resource that a person may allocate to various activities (Radner and Rothschild, 1975), it implies that all else being equal, an application perceived to be easier to use than another is more likely to be accepted by users. Past research has generally confirmed that perceived ease of use can influence computer usage directly (Davis, 1986; 1989). In general, if a system is easy to use, it requires less effort on the part of users, thereby increasing the likelihood of adoption and usage. Conversely, systems that are complex or difficult to use are less likely to be adopted since it requires significant effort and interest on the part of the user. In the context of the Internet, the easy to use browsers have largely been responsible for the rapid growth in the number of Internet users.

#### **2.4 Relationship between Perceived Ease of Use and Online Banking Use**

Perceived ease of use has an inverse relationship with the perceived complexity of use of the technology, it affects perceived usefulness. Morris and Dillon (1997) found that TAM contributes to the prediction of individual usage of software in World Wide Web environment. In a similar study, Suh and Han (2002) addressed “trust” to investigate the acceptance of internet banking, and revealed that “trust”, together with PU and PEU, is an important predictor of the attitude toward the internet banking system.

Perceived ease of use is another major determinant of attitude toward use in the TAM model. This internal belief ties to an individual’s assessment of the mental effort involved in using a system (Davis, 1989). Perceived usefulness and perceived ease of use are distinct but related constructs. Improvements in perceived ease of use may contribute to improved performance. Since improved performance defines perceived usefulness that is equivalent to near-term usefulness, perceived ease of use would have a direct, positive effect on perceived near-term usefulness. Davis (1989) once proposed to test the generality of the observed usefulness and ease of use tradeoff and to assess the impact of external interventions on these internal behavioral determinants. The empirical research findings are, however, mixed (Davis *et al.*, 1989; Davis, 1993; Chau, 1996; Venkatesh, 1999). Ease of use is correlated positively with use of the internet for business activity. A more recent investigation suggested that students’ course web

site use tended to be greater when the site was viewed as being useful and easy to use (Selim, 2003).

On the other hand, quite a few empirical studies confirmed the effect of ease of use on attitude toward use (Al-Gahtani and King, 1999; Lu and Gustafsen, 1994; Moore and Benbasat, 1991; Venkatesh and Davis, 1996). Venkatesh (2000) believes that for any emerging IT/IS, perceived ease of use is an important determinant of users' intention of acceptance and usage behavior. Even though Chau (1996) excluded the original construct of perceived ease of use in his modified TAM model, he admitted that in the exploratory state of technology use, ease of use plays an important role. This point was also supported by a recent survey done in Europe. A mail survey by Embedded Solutions among 800 professionals in England in 1999 found ease of use among the top five factors in order of significance for determining use of wireless handheld devices (Clarke, 2000).

## **2.5 Perceived Enjoyment**

Davis *et al.* (1992) theorized that perceived enjoyment directly influenced computer-usage intention (i.e. a word processing program). Also, Igarria *et al.* (1996) studied the effect of perceived fun-enjoyment. In this study, support was found for a positive relationship between perceived fun-enjoyment and system usage among managers and professionals who either had a microcomputer on their desk or had easy access to one in the daily performance of their job. Perceived enjoyment may be defined as the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated (Carroll and Thomas, 1988; Deci, 1971; Malone, 1981a). Hence, individuals that experience immediate pleasure and joy from using the computer will be more likely to use it more extensively than others. This notion is supported by Triandis (1971, 1980) who posited that affect – “the feeling of joy, elation, pleasure or depression, disgust, displeasure and hate associated by an individual with a particular act” – has an impact on behavior. Furthermore, research on the role of enjoyment in workplace computing (Webster, 1989; Webster and Martocchio, 1992) and computer games (Holbrook *et al.*, 1984; Malone, 1981, 1981) have suggested the importance of enjoyment on usage intentions and behaviors. In a similar vein, Davis *et al.* (1992) found that perceived enjoyment has significant effects on intention to use a word processing program.



## **2.6 Relationship between Perceived Enjoyment and Online Banking Use**

Perceived enjoyment associated by individuals with a particular act, could thus have a major impact on an individual's response to the web, their attitudes and behaviors. However, although as shown in previous research, perceived enjoyment could occur during goal-directed activities, experiential users are specifically moved by an intrinsic motive (e.g. feeling pleasure and enjoyment from the activity itself) (Bloch *et al.*, 1986). The use of microcomputers may also be motivated by intrinsic psychological rewards.

Again, Perceived enjoyment and fun represent an intrinsic motivation for microcomputer usage. Individuals who experience pleasure and joy from using the machine and perceive any activity involving use of microcomputers as inherently enjoyable, apart from any anticipated improvement in performance, are likely to use it more extensively than others (Davis, 1992; Malone, 1981). Davis et al. (1989) found that while perceived usefulness emerged as the major determinant of computer acceptance in the workplace, enjoyment had a significant effect beyond perceived usefulness.

Hofstede's (1980) cultural dimension of uncertainty avoidance relates to the extent to which people are threatened by uncertainty or unstructured situations. Since playfulness involves creativity as well as unstructured experimentation with computer-based tasks, it could be argued that customers from moderate to high uncertainty avoidance cultures such as Nigeria would not be motivated to perceive using the computer as enjoyment.

## **2.7 Amount of Information on Online Banking**

The amount of information consumers have about online banking has been identified as a major factor impacting the adoption. According to Sathye (1999), while the use of online banking services is a fairly new experience to many people, low awareness of online banking is a major factor in causing people not to adopt online banking. In an empirical study of Australian consumers Sathye (1999) found that consumers were unaware about the possibilities, advantages/disadvantages involved with online banking.

## **2.8 Security and Privacy**

The importance of security and privacy to the acceptance of online banking has been noted in many banking studies (Roboff and Charles, 1998; Sathye, 1999; Hamlet and Strube, 2000; Tan and Teo, 2000; Polatoglu and Ekin, 2001; Black *et*

*al.*, 2002; Giglio, 2002; Howcroft *et al.*, 2002). To be more precise, privacy and security were found to be significant obstacles to the adoption of online banking in Australia (Sathye, 1999). Roboff and Charles (1998) found that people have a weak understanding of online banking security risks although they are aware of the risks. Furthermore, they found that consumers often rely that their bank is more concerned about privacy issues and protect them. Finally they argue that although consumers' confidence in their bank was strong, their confidence in technology was weak (Howcroft *et al.*, 2002). As the amount of products and services offered via the Internet grows rapidly, consumers are more and more concerned about security and privacy issues. Generally speaking, many consumers are unwilling to give private information over the telephone or the Internet, for example credit card information (Hoffman and Novak, 1998).- According to many studies (Westin and Maurici, 1998; Cranor *et al.*, 1999) privacy issues have proven important barriers to the use of online services. Basically, consumers are not willing to accept that they do not have full control over their own behaviours. They want to master their own acts and to know the causes and consequences of their own and others' acts (Baronas and Louis, 1988). Users want to control what kind of data is collected, for what purposes, how long data is recorded for, how and for what purposes their data is processed (Kobsa, 2001; Kobsa, 2002). Gathering and recording user data without consumers' awareness concerns them (DePallo, 2000).

### **3.1 Research Questions and Hypothesis**

This study investigates the following questions:

1. Is there any significant relationship between Perceived usefulness and online banking use in the context of DBBL?
2. Is there any significant relationship between Perceived ease of use and online banking use in the context of DBBL?
3. Is there any significant relationship between Perceived enjoyment and online banking use in the context of DBBL?
4. Is there any significant relationship between information of online banking and online banking use in the context of DBBL?
5. Is there any significant relationship between security and privacy and online banking use in the context of DBBL?

### **3.2 Research Hypotheses**

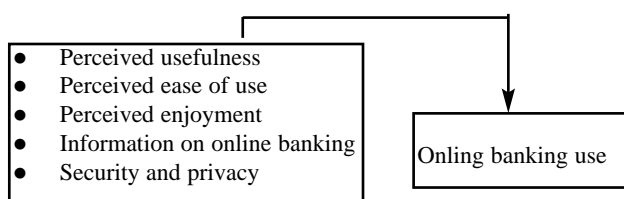
Seeking answers to the research questions in the context of DBBL, we test the following hypotheses:

1. There is a significant relationship between perceived usefulness and online banking use.
2. There is a significant relationship between perceived ease of use and online banking use.
3. There is a significant relationship between perceived enjoyment and online banking use.
4. There is a significant relationship between information of online banking and online banking use.
5. There is a significant relationship between security and privacy and online banking use.

### 3.3 Conceptual Framework

A conceptual framework providing relationship between Perceived usefulness, Perceived ease of use, Perceived enjoyment, information on online banking, security and privacy and online banking use in context of DBBL is presented below.

Figure 1: Conceptual framework



## 4. Research Methodology

### 4.1 Research Design

The conceptual framework presented in Figure 1 shows the relationship among these variables. The independent variables for this study are Perceived usefulness, Perceived ease of use, Perceived enjoyment, information on online banking and security and privacy. The dependent variable is online banking use. The research questions and hypotheses provide sufficient support for the conceptual framework. Hence, the researchers have adopted a co- relational study, which is justified since the focus of the study is on establishing a relationship between the stated variables.

## **4.2 Sampling Method**

The study was conducted on 100 customers of DBBL who frequently visit the bank during peak hours. Simple random sampling was used by selecting every 9<sup>th</sup> customer for the survey. Only the account holders in the bank were considered in the sample frame.

## **4.3 Data Collection and Analysis**

The data was collected through structured questionnaires. A previous research done by Hsu, Lu & Hsu (2006) adopted an online survey but in this part of the world it is difficult to persuade online users to fill up a questionnaire.

SPSS (Statistical package for social science) was used for data analysis, unlike in the previous research by Hsu, Lu & Hsu (2006), where factor analysis was implemented. Due to the lack of technical and statistical knowledge, we considered the correlation and regression analysis as ideal.

Correlation matrix was prepared for assessing the relationship among the variables. In the correlation matrix, significant positive and negative relationships were taken for interpretation and justifying the hypothesized relationships. The stepwise regression analysis was pursued for investigating to what extent the independent variables explain the dependent variable.

## **5. Results**

### **5.1 Reliability Coefficient and Descriptive Statistics**

The reliability coefficients, means and standard deviations of all the constructs in the current study are displayed in Table 1. The coefficient alphas for the different constructs were computed using the reliability procedure in SPSS. Nunnally (1978) suggested that for early stages of any research the reliability of .50-.60 is sufficient. The reliabilities of all the constructs in this study are found to be above the standard set by Nunnally (1978).

Mean scores have been computed by equally weighting the mean scores of all the items. On a five-point scale, the mean score for perceived usefulness is 3.54 (SD = .63) which indicates the perceived usefulness of customers is on the higher side on the scale. However, the SD is moderately high so there has been a limited difference of opinion among the customers. The mean score for perceived ease of use is 3.42 (SD =.57), which is higher than average and the perceived ease of use is well appreciated by the customers. The mean score for perceived enjoyment is

Table 1 : The table of Reliability Coefficient and Descriptive Statistics of perceived usefulness, perceived ease of use, perceived enjoyment, security and privacy, online information and online banking use

Scale	Number of Items	Alpha	Mean	Std. Deviation
Perceived usefulness	6	.81	3.5450	.63469
Perceived ease of use	6	.77	3.4250	.57510
Perceived enjoyment	5	.59	3.5720	.54533
Security and privacy	6	.72	3.4733	.58350
Banking information	2	.50	3.4600	.74766
Online banking use	4	.68	3.4600	.62736

3.57 (SD = .54), which is higher than average on the scale. The mean score for security and privacy is 3.47 (SD = .58), which is higher on the scale. The mean scores of online information of DBBL is 3.46 (SD = .74) indicating that customers perception is moderately high. The mean scores of online banking use of DBBL is 3.46 (SD = .62).

Table 2 : Correlation Matrix for perceived usefulness, perceived ease of use, perceived enjoyment, security and privacy, online information and online banking use

		Perceived usefulness	Perceived ease of use	Perceived Enjoyment	Security and privacy	Online information
Perceived usefulness	Pearson Correlation	1	.617(**)	.558(**)	.503(**)	.334(**)
	Sig. (2-tailed)	.	.000	.000	.000	.001
	N	100	100	100	100	100
Perceived ease of use	Pearson Correlation	.617(**)	1	.344(**)	.373(**)	.320(**)
	Sig. (2-tailed)	.000	.	.000	.000	.001
	N	100	100	100	100	100
Perceived Enjoyment	Pearson Correlation	.558(**)	.344(**)	1	.740(**)	.718(**)
	Sig. (2-tailed)	.000	.000	.	.000	.000
	N	100	100	100	100	100
Security and privacy	Pearson Correlation	.503(**)	.373(**)	.740(**)	1	.576(**)
	Sig. (2-tailed)	.000	.000	.000	.	.000
	N	100	100	100	100	100
Online information	Pearson Correlation	.334(**)	.320(**)	.718(**)	.576(**)	1
	Sig. (2-tailed)	.001	.001	.000	.000	.
	N	100	100	100	100	100
Online Banking use	Pearson Correlation	.701(**)	.731(**)	.382(**)	.396(**)	.398(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	100	100	100	100	100

Note: \* $p < .05$ , \*\* $p < .01$ .

## 5.2 Correlation Analysis

A correlation analysis was conducted on all variables to explore the relationship between variables. The bivariate correlation procedure was subject to a two tailed statistical significance at two different levels highly significant ( $p < .01$ ) and significant

The result of correlation analysis for all the variables is shown in Table 2. It examines the relationship between perceived usefulness, perceived ease of use, perceived enjoyment, security and privacy, online information and online banking use.

The variable, weakly and significantly correlated with online banking use was perceived usefulness ( $r = .701$ ,  $p < .01$ ). Perceived ease of use was found to be significantly and strongly positively correlated with online banking use ( $r = .731$ ,  $p < .01$ ). Again, perceived enjoyment was significantly positively related with online banking use ( $r = .382$ ,  $p < .01$ ) but the relationship was weak. The variable significantly and moderately positively correlated with security and privacy was online banking use ( $r = .396$ ,  $p < .01$ ). There was significant moderate positive relationship between online information and online banking use ( $r = .398$ ,  $p < .01$ ).

## 5.3 Regression Analysis

Both stepwise and entered regression were conducted to assess the relationship between the study variables.

### *Stepwise regression*

A stepwise regression analysis was performed to identify the relationship between perceived usefulness, perceived ease of use, perceived enjoyment, security and privacy, online information and online banking use.

Table 3 : Stepwise regression on Online banking use

Variables	B	SE B	$\hat{a}$	R <sup>2</sup>	?R
Step 1				.560	
Security and privacy	.793	.072	.793***		
Step 2				.60	0.04
Security and privacy	.426	.063	.654***		
Online information	.286	.050	.189***		
Step 3				.62	0.02
Security and privacy	.317	.071	.539***		
Online information	.296	.048	.173***		
Perceived ease of use	.250	.086	.180**		

Table 3 depicts that in DBBL security and privacy, online information and perceived ease of use have been significantly related and found to be significant in explaining online banking use. The predictor variables, which were statistically significantly related, together explained 62 % of the variance in online banking use whereas security and privacy, online information and perceived ease of use explained about 56% (step 1), 4% (step 2) and 2% (step 3) of online banking use, respectively.

From the above regression models of stepwise regression, step 3 was found to be the most representative one. Three out of five predictors explained variation in online banking use. Here,  $\beta$  was the highest for security and privacy which was found to be 53.9 % ( $p < .001$ ) and signifies for an additional 1 unit change in customer participation, there will be .539 unit of change in online banking use, keeping all the other predictors constant.

Perceived ease of use had  $\beta$  of 18 % ( $p < .001$ ), which signifies that for every 1 unit change in perceived ease of use there will be .180 unit change in online banking use, keeping all the other predictors constant. Then the  $\beta$  of online information was found to be 4 % ( $p < .01$ ), which indicates that the change of every 1 unit in supervisor support will cause .04 unit change in online banking use.

## 6. Assessment of the Hypotheses

### Hypothesis 1

There is a significant relationship between perceived usefulness and online banking use in DBBL, which was found to be strong and positive ( $r = .701$ ,  $p < .01$ ). Therefore, the result we derived from correlation analysis satisfies hypothesis 1.

But, in stepwise regression, perceived usefulness was omitted, which provides partial support for the hypothesis 1.

### Hypothesis 2

There is a significant relationship between perceived ease of use and online banking use in DBBL, which was found to be highly positive ( $r = .731$ ,  $p < .01$ ). So, the result we derived from correlation analysis satisfies hypothesis 2.

The result of stepwise regression indicates that perceived ease of use ( $p < .01$ ) was statistically significantly related with the dependent variable online banking use in DBBL.

The  $\beta$  was found to be (.04) ( $p < .01$ ), which indicates that an additional 1 unit of change in perceived ease of use would cause .04 unit of change in online banking use. Therefore, perceived ease of use has some significant relationship with the change of online banking use.

Therefore, the result of stepwise regression analysis provided support for hypothesis 2.

### **Hypothesis 3**

There is a significant relationship between perceived enjoyment and online banking use in DBBL. The relationship was found to be moderately positive ( $r = .382$ ,  $p < .01$ ). Therefore, the result we derived from correlation analysis satisfies hypothesis 3.

The result of stepwise regression indicates that it was omitted from the step and it was not statistically significantly related with the dependent variable online banking use in DBBL. Therefore, the result of stepwise regression analysis provided partial support for hypothesis 3.

### **Hypothesis 4**

There is a significant relationship between online information and online banking use in DBBL, which was found to be moderately positive ( $r = .398$ ,  $p < .01$ ). Therefore, the result we derived from correlation analysis satisfies hypothesis 4.

The result of stepwise regression indicates that online banking information ( $p < .001$ ) was statistically significantly related with the dependent variable online banking use in DBBL.

The  $\beta$  was found to be (.173) ( $p < .001$ ), which indicates that a 1 unit of change in online information would cause .173 unit of change in online banking use. Therefore, online information has a significant relationship with the change of online banking use of the customers. Therefore, the result of stepwise regression analysis provided support for hypothesis 4.

### **Hypothesis 5**

There is a significant relationship between security and privacy in DBBL, which was found to be moderately positive ( $r = .396$ ,  $p < .01$ ). Therefore, the result we derived from correlation analysis satisfies hypothesis 5.

The result of stepwise regression indicates that security and privacy ( $p < .001$ ) was



statistically significantly related with the dependent variable online banking use in DBBL.

The  $\beta$  was found to be (.539) ( $p < .001$ ), which indicates that a 1 unit of change in security and privacy would cause .539 unit of change in online banking use. Therefore, security and privacy has the best significant relationship with the change of online banking use of the customers.

Security and privacy explained about 56% variation in online banking use of the customers. Therefore, the result of stepwise regression analysis provides support for hypothesis 5.

## **7. Recommendation**

The study has produced several impeccable findings that need to be dealt with proper care for improving customers' online usage. The findings are as follows:

Perceived ease of use, security and privacy and online information are significantly positively correlated with online banking uses of the customers. Therefore, DBBL should consider these factors when they are looking forward to increasing their online banking uses, which in turn would increase their organizational development.

The regression results suggest that perceived ease of use and security and privacy are the most essential and crucial variables that could explain variation in online banking uses. This is why DBBL should improve and give proper attention to make sure the ease of use of online banking and ensure customers security and privacy.

## **8. Conclusion**

With a view to maintaining a standard online banking usage of the customers, the role that online banking uses plays is invaluable. These days, the quality of service has been the decisive factor in companies' strong position.

Therefore, it is hoped that in near future DBBL will be able to ensure the online banking use of its customers for greater development of the organization and enable itself to hold a lion's share of the market for the banking sector.

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