Chapter - 06

Discussion

6.1 Introduction

This study investigated the effectiveness of e-banking applications in Sri Lanka. In addition, it explores the factors affecting level of e-banking effectiveness and relationships between the dependent (level of e-banking effectiveness) and independent variables such as customer attitude towards e-banking (ATE), scope of e-banking applications (SEA), level of e-banking service quality (ESQ), security of e-banking (SEB), profitability of e-banking (PEB), considering e-banking as a strategic tool (EST), level of customer relationship management (CRM) and operational efficiency of e-banking (EOE).

This chapter discusses the outcomes of the study on the factors influencing the e-banking effectiveness within the commercial banking environment. The analysis is based on perspectives of customers as well as banks. This chapter discusses the findings in general and the relationship to the findings in literature. It also gives an insight of the degree of the influence of independent variables (predictors) on level of e-banking effectiveness in the commercial banking environment in Sri Lanka.

6.2 The Relationship Between the Customer Attitude Towards (ATE) E-banking and the Level of E-banking Effectiveness

The analysis of e-banking customers based on the 1-tailed test reveals that there is a positive correlation at 1 % significant level (r = 0.503, p = 0.000) between the customers attitude towards e-banking and the level of e-banking effectiveness but it is not strong.

The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables. In this case the strength of correlation is modest because 'r' has taken the value of 0.503. This indicates

that the customer attitude towards e-banking increases positively, the level of e-banking effectiveness also increase to some extent (0.503), but not all, of the level of e-banking effectiveness.

The extent to which the customers attitude towards e-banking contributes the level of e-banking effectiveness is shown in the Table 5.15. Our analysis shows that 0.7 % of e-banking effectiveness is accounted for by the customers attitude towards e-banking (R square = 0.007).

The multiple regression (see Table 5.15 on page 61) reveals that this variable has strength of predictability. As the delta change (the unique contribution of this variable added to the regression equation) is acceptable and significant ($p = 0.017$). Therefore this variable (ATE) has been included in the multiple regression analysis.

The results in the Table 5.9 on page 54 shows that according to the responses of e-banking customers, the attitude towards e-banking lie around the mean value 3.46 ± 0.29 (on a scale of 1- strongly disagree to 5- strongly agree). Hence, one could conclude that the e-banking customers have moderate positive attitude towards e-banking. So banks must concentrate on this aspect because it would be useful to them to increase certain extent the level of e-banking effectiveness in the future. This indication help banks to profile customer attitudes towards e-banking and also support to predict how these attitudes might change in the future. According to Black (2001) Karjaluoto (2002), positive attitudes and previous experiences with technology and computers are identified as common traits of most users with regard to the proper characteristics of individuals currently using on line banking services.

From this research, it appears that in Sri Lanka customer attitude towards e-banking is positive and modest one. But customer attitude towards e-banking might change in the future. Based on this study, the following can be identified as the reasons to the positive customer attitude towards e-banking:

- Moderate level customer trust in e-banking

- Moderate level benefits through the e-banking

- Considerable level of loyalty in e-banking

- Moderate level of acceptance rate of e-banking

In addition, difficulties experienced by customers when using technology might be limited to achieve higher level of positive customers attitude towards e-banking in Sri Lanka.

Finally, one could observe a moderate contribution by the customer attitude towards e-banking on level of e-banking effectiveness. At the multiple regression analysis this variable (ATE) is included because the delta change caused by this variable is acceptable. Therefore it can be concluded that the ATE is one of the influencers on the level of e-banking effectiveness.

6.2 The Relationship Between Scope of E-banking (SEA) and the Level of E- banking Effectiveness

The study reveals a positive relationship between the scope of e-banking applications and level of e-banking effectiveness (r = 0.618, p =0.000) at 1% significant level. Hence the aspect of scope of e-banking applications is reflected on the level of e-banking effectiveness.

The sign (+/-) of the coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables. In this case the strength of correlation is above moderate level because 'r' has taken the value of 0.618. This indicates that the increase in scope of e-banking will increase the level of e-banking effectiveness.

The extent to which the scope of e-banking applications contributes the level of e-banking effectiveness is shown in the Table 5.15. Our analysis shows that 0.9 % of

e-banking effectiveness is accounted for by the customer attitude towards e-banking (R square = 0.009).

The multiple regression (see Table 5.15 on page 61) reveals that this variable has strength of predictability. As the delta change (the unique contribution of this variable added to the regression equation) is acceptable and significant ($p = 0.005$) Therefore this variable (SEA) has been included in the multiple regression analysis.

The mean value of this independent variable (SEA) is given in the Table 5.10. It shows that the contribution of scope of e-banking applications on the level of e-banking effectiveness lies around 2.58± 0.56 (on a scale of 1 – strongly disagrees to 5 – strongly agree). These values give the impression that the e-banking customers feel that the scope of e-banking applications are not enough to satisfy their entire banking needs in Sri Lanka. Because customers feel services provided over the e-banking has limited scope when compared with the scope of branch banking. In Sri Lanka, banks which are providing e-banking services to their customers are not in a position to provide all the traditional banking services using on line channel. E-banking depends on branch banking channel in Sri Lanka.

Banks in Sri Lanka does not think their e-banking operations without branch banking. Branch banking and e-banking must support each other. E-banking cannot function independently. Because, to complete huge transactions presence of customers to the bank is still necessary due to certain legal and other (laws of signing, witnesses, conformation and verification) requirements. Moreover, banks have many advantages in branch banking. It is not wise to reduce or give up their traditional branches.

In Sri Lanka, if we consider the scope of e-banking (service range), banks have already gone into transaction stage. However, banks do not deem that their e-banking will go into stand-alone, because banks know e-banking must get support from branch banking, for example, if customers want to become particular banks e-banking users, they have to go to branch bank office which is close to customer district or region.

The result of this study shows that increase in scope of e-banking applications, also increase the level of e-banking effectiveness. Hence, it is reasonable to say that if a bank increases scope of e-banking applications or service range of e-banking applications in the future it will increase the level of e-banking effectiveness. Therefore it can be concluded that the SEA is one of the predictors of the level of e-banking effectiveness in Sri Lanka.

6.3 The Relationship Between Level of E-banking Service Quality (ESQ) and the Level of E-banking Effectiveness

The service quality of e-banking is another important factor, which influence the level of e-banking effectiveness. The correlation results have shown in the Table 5.14 express that the association between ESQ and level of e-banking effectiveness counts (r = 0.707, p = 0.000), which indicates that the increase in e-banking service quality will increase the level of e-banking effectiveness to the extent of 0.707 level. The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables. There is a fairly strong positive relationship between the level of ESQ and the level of e-banking effectiveness.

The multiple regression (see Table 5.15 on page 61) reveals that the strength of predictability is high. As the delta change (the unique contribution of this variable added to the regression equation) is considerable and significant (p = 0.000). The extent to which the e-banking service quality contributes the level of e-banking effectiveness is shown in the Table 5.15. Our analysis shows that 16.1 % of e-banking effectiveness is accounted for by the service quality of e-banking (R square = 0.161).

Level of service quality of e-banking can be considered as an important predictor of e-banking effectiveness in customers' point of view in Sri Lanka. The results show that the influence of this variable (ESQ) on dependent variable (level of e-banking effectiveness) is high. On the stepwise regression analysis when this variable was added, other

variables' contribution has become small except one variable (i.e. security of e-banking - SEB). The sample mean shown by descriptive is 4.34 with a standard deviation (SD) of 0.25, which gives the impression that the higher level of service quality of e-banking in Sri Lanka.

This study confirms the study of Olga Luštšik (2003) who states that the e-banking acceptance depends probably on bank service quality, customer preferences and satisfaction.

However, the impact of service quality of e-banking on effectiveness has also been studies by other scholars, e.g. Parasuraman (2000) and Malhotra (2002) who have found no significant association between these variables. But our present study reveals that higher the level of service quality of e-banking leads to the higher the level of e-banking effectiveness.

Finally it could be concluded that the service quality of e-banking is one of the important predictors of the level of e-banking effectiveness in Sri Lanka.

6.4 The Relationship Between Security of E-banking (SEB) and the Level of E-banking Effectiveness

The correlation results show that the security of e-banking has a fairly strong positive correlation with the level of e-banking effectiveness. (r = 0.720, p = 0.000). When comparing the correlation between SEB and the level of e-banking effectiveness fairly strong positive coefficient tells us that a change in the SEB will usually predict a change in the level of e-banking effectiveness. The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables.

Security of e-banking can be taken as a most important predictor of e-banking effectiveness in the perspective of the e-banking customers in Sri Lanka. The results show that the influence of this variable on the dependent variable is very much high. On

the stepwise regression analysis when this variable is added, other variables' contribution has become small except e-banking service quality (ESQ).

The multiple regression (see Table 5.15 on page 61) reveals that the strength of predictability is high. As the delta change (the unique contribution of this variable added to the regression equation) is considerable and significant ($p = 0.000$). The extent to which the security of e-banking contributes the level of e-banking effectiveness is shown in the Table 5.15. Our analysis shows that 48.8 % of e-banking effectiveness is accounted for by the service quality of e-banking (R square = 0.488).

The sample mean shown by descriptive is 3.59 with a standard deviation of 0.45, which gives the impression that the security of e-banking is influenced on the level of e-banking effectiveness.

According to Cooper (1997) and Daniel (1999) another important factor affecting the acceptance and adoption of new innovation is the level of security or risk associated with it. Even in countries where Internet banking has long been established, one of the most important factors slowing progress of this new innovation is the consumers concern for security of financial transactions over the Internet. This study confirms the study of Cooper (1997) and Daniel (1999). An empirical survey by Sathye (1999) on Australian consumers has confirmed this same fact.

Based on this study, the following can be identified as the reasons to the above results:
- In Sri Lanka, banks use numerous security methods and tools to protect their client's personal information and financial transactions such as encryption, SSL, security token, firewall, computer virus monitoring equipment, backup information systems etc. All of these security measures are considered effective ways of blocking unauthorized access, electronic viruses and denial-of-service attacks on an e-banking network.
- Banks effectively managed their e-banking security aspects very well.

- Security aspect of e-banking applications are analyzed, determined and managed periodically and effectively.

Above mentioned best security practices has created statistically significant relationship between security of e-banking and the level of e-banking effectiveness. If customers feel more security in e-banking that motivate them to participate in e-banking activities.

6.5 The Relationship Between Profitability of E-banking (PEB) and the Level of E-banking Effectiveness

In the present banking scenario all banking operations gradually came to be measured in terms of their ability to generate profits, likely effectiveness of e-banking also must be measured in terms of it ability to generate profits. Banks also require higher profits to compensate the higher e-banking related investment cost, operating cost and overhead expenses. The following indicators are selected to represent the profitability through e-banking in this research such as new customers, financial benefits, sustainability, value of transaction over the e-banking and return on assets (ROA).

The analysis of banks view based on the 1-tailed test reveals that there is a positive correlation at 1 % significant level (r = 0.407, p = 0.000) between profitability of e-banking and the level of e-banking effectiveness.

The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables. In this case the strength of correlation is weak because 'r' has taken the value of 0.407. This indicates that the profitability of e-banking increases positively, the level of e-banking effectiveness also increase to some extent (0.407), but not all, of the level of e-banking effectiveness.

The multiple regression (see Table 5.29 on page 77) reveals that the strength of predictability is weakened. The delta change (the unique contribution of this variable

added to the regression equation) is very low and not significant (p = 0.687). Therefore this variable has been excluded in the multiple regression analysis. The extent to which the profitability of e-banking contributes the level of e-banking effectiveness is shown in the Table 5.29. Our analysis shows that 0.1 % of e-banking effectiveness is accounted for by the profitability of e-banking (R square = 0.001). According to this result the influence of this variable on the dependent variable is negligible. This may be because of the effect of the other variables taken together during the regression analysis.

The sample mean shown by descriptive is 3.53 with a standard deviation (SD) of 0.50 which gives a notion that most of the banks have perceived profitability of e-banking as an important aspect in measuring the level of e-banking effectiveness.

Based on this study the following can be identified as the reasons for the low profitability of e-banking in Sri Lanka:

- In short term banks are struggling to get clients
- High investment cost of e-banking
- High operational expenses of e-banking (including security, backup and system maintenance)
- Low profitability due to narrowing net margins of e-banking operations due to high competition

The finding of this study confirms the report of Hitt, Frei and Harker (1999) who found that banks' investment in internet banking had not resulted in new, profitable customers to the firm, as many banks had hoped. Rather, it seems to be to retain high-value customers. Finally, in determining the degree of influence of profitability of e-banking on level of e-banking effectiveness in banks perspective, one could observe a weak contribution.

6.6 The Relationship Between Considering E-banking as A Strategic Tool (EST) and the Level of E-banking Effectiveness

In considering e-banking as a strategic tool is another important factor, that affects the level of e-banking effectiveness. The study reveals a positive relationship between EST and level of e-banking effectiveness (r = 0.604, p =0.000) at 1% significant level. Hence considering e-banking as a strategic tool is reflected on the level of e-banking effectiveness.

The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables. In this case the strength of correlation is above moderate level because 'r' has taken the value of 0.604. This indicates that the increase in considering e-banking as a strategic tool will increase the level of e-banking effectiveness.

The extent to which considering e-banking as a strategic tool contributes the level of e-banking effectiveness is shown in the Table 5.29. Our analysis shows that 38.1 % of e-banking effectiveness is accounted for by this variable (R square = 0.381).

The multiple regression (see Table 5.29 on page 77) reveals that the strength of predictability is high. As the delta change (the unique contribution of this variable added to the regression equation) is considerable and significant (p = 0.000) Therefore this variable (EST) has been included in the multiple regression analysis.

The main reason of this phenomenon is that the banks have been introduced e-banking as a strategic move in their banking industry. They considered e-banking as a main source of product differentiations and competitive advantage. These trends have increased among the banks in the recent years in Sri Lanka.

The relationship between considering e-banking as a strategic tool and level of e-banking effectiveness indicates that if banks considered the greater the e-banking as a strategic tool, the higher the level of e-banking effectiveness.

In considering e-banking as a strategic tool can be taken as a prime predictor of e-banking effectiveness in the perspective of the commercial banks in Sri Lanka. The results show that the influence of this variable on the dependent variable is high. On the stepwise regression analysis when this variable was added, other variables' contribution has become very small. Finally, in determining the degree of influence of EST on level of e-banking effectiveness is considerable in the banks perspective.

6.7 The Relationship Between Level of Customer Relationship Management (CRM) and the Level of E-banking Effectiveness

The analysis of banks view based on the 1-tailed test reveals that there is a positive correlation at 1 % significant level (r = 0.567, p = 0.000) between the CRM and the level of e-banking effectiveness but it is not strong.

The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables. In this case the strength of correlation is modest because 'r' has taken the value of 0.567. This indicates that the CRM increases positively, the level of e-banking effectiveness also increase to some extent (0.567), but not all, of the level of e-banking effectiveness. The extent to CRM contributes the level of e-banking effectiveness is shown in the Table 5.29. Our analysis shows that 4.1 % of e-banking effectiveness is accounted for by this variable (R square = 0.041).

The multiple regression (see Table 5.29 on page 77) reveals that the strength of predictability is moderate. As the delta change (the unique contribution of this variable added to the regression equation) is considerable and significant (p = 0.000) Therefore this variable (CRM) has been included in the multiple regression analysis.

The sample mean shown by descriptive is 3.44 with a standard deviation of 0.39 which gives a notion that most of the banks have perceived customer relationship management has a moderate impact on the level of e-banking effectiveness in Sri Lanka.

6.8 The Relationship Between E-banking Operational Efficiency (EOE) and the Level of E-banking Effectiveness

The analysis of banks view based on the 1-tailed test reveals that there is a positive correlation at 1 % significant level (r = 0.350, p = 0.000) between EOE and the level of e-banking effectiveness.

The sign (+/-) of the correlation coefficient indicates that direction of the relationship and its value indicates the strength of relationship between two variables.   In this case the strength of correlation is very weak because 'r' has taken the value of 0.350. This indicates that the operational efficiency through e-banking increases positively, the level of e-banking effectiveness also increase to some extent (0.350), but not all, of the level of e-banking effectiveness.

The multiple regression (see Table 5.29 on page 77) reveals that this variable has strength of predictability is weakened. The delta change (the unique contribution of this variable added to the regression equation) is low, but significant (p = 0.024).   However, this variable has been included in the multiple regression analysis. The extent to which the operational efficiency through e-banking contributes the level of e-banking effectiveness is shown in the Table 5.29. Our analysis shows that 4.4 % of e-banking effectiveness is accounted for by the EOE (R square = 0.044). According to this result the influence of this variable on the dependent variable is not negligible.

The sample mean shown by descriptive analysis is 4.06 with a standard deviation of 0.41 which gives a notion that most of the banks have agreed that operational efficiency through e-banking is above the standard mean value (standard mean value = 3). But this finding is contradicted with the correlation analysis due to certain trade off between cost reduction elements and productivity elements involved in this research. However the stepwise multiple regression analysis has supported the finding of descriptive analysis.