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Assessing the Factors for Choosing E-banking Services of Public Commercial Banks in Bangladesh

Rony Kumar Datta
Associate Professor, Department of Finance and Banking,
Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh
Md. Mehedul Islam Sabuj
Assistant Professor, Department of Marketing,
Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh
Md. Main Uddin Ahammed
Assistant Professor, Department of Finance and Banking,
Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh

Abstract:
In Bangladesh almost every private commercial Bank has adopted electronic banking but the public commercial banks are still in the process of implementing electronic banking. Stressed on this fact the aim of this study is to examine the factors that can influence the customers of public commercial banks of Bangladesh in choosing E-banking services. Based on the primary data collected through a structured questionnaire from the Rupali Bank Limited, which is a state owned commercial bank, this study used 'Independent Sample t-test' between the two independent groups of customer, namely- E-banking user and conventional user. To find out the influential factors, this study considered six factors such as, Accessibility of Internet, Reluctance to change, Security, Convenience, Ease to use and Cost. Findings of the study revealed that all the considering factors except the cost factor have a statistical significance on the decision of the customers regarding the uses of E-banking services from Rupali Bank Limited. The findings of this study can help the authority of Banks and policy makers in adopting E-banking as well as formulating policy to design E-banking related new products and services.

Keywords: *E-banking, service marketing, public commercial banks, dominant factors, independent sample test, Bangladesh*

1. Introduction

E-Banking refers to the banking activities performed through the electronic means i.e., using telecommunications network, web technology, personal computer, smart phones and other electronic devices. The first successful introduction of electronic system-based transferable deposition certificate was launched by the National City Bank of New York in 1961. With the development in technology, Electronic Fund Transfer (EFT) acquired place as the first phase of E-banking where the key elements are Automated Teller Machine (ATM), Point of Sale (POS) and Automated Clearing House. E-banking is a product which is designed for the tenacity of online banking that allows clients to have easy and safe entrance to their bank account. E-banking is a safe, fast, easy, effective and efficient electronic service that allows customers' entrance to bank account and to carry out online banking services. Clients of banks can save time by performing banking transactions from any location and at any time from their home or office using this service. The only thing they need is the internet access.

People are now more concerned in using the POS terminal while purchasing items from the store. From the report of Tech Matra, it has been exposed that in January 2018 there were a total of 3,55,265 number of POS transactions. Banks and non-Bank financial institutions are encouraging the store owners to use the POS terminal for their transactions. At present, in Bangladesh almost all major cities, popular shopping malls have the POS terminal payment facility. The important issue as well as the most important challenge for the government is to ensure security and prevent fraud and abusing of the modern financial systems. More people in Bangladesh are turning out to be electronic purchasers with the developing number of installment progressions, who are employing portable installment as a lifestyle and to an ever-increasing extent, common practice. The government is facilitating an advantageous environment to promote innovations in payments while the regulator is providing appropriate regulations and strict supervision. At present, an incredible level of the legislature to-business installments has been moved to the computerized channels, while in excess of 50 million individuals utilize MFS advancement in their everyday exchanges in the nation under a protected and business accommodating monetary condition. Smartphone penetration with 4G networks and use of QR technology is increasing day-by-day and the use of mobile wallets has turned more useful.

Since most of the people in Bangladesh are not good at using modern technology and considering the importance of digital technology for banking sector as well as its contribution in the economic development of Bangladesh, this study intends to assess the customer preference in using e-banking services and to find out the preferential factors behind using the e-banking services in the public commercial bank in Bangladesh. This study took Rupali Bank Ltd. as the representative of public commercial bank since it is one of Bangladesh's most powerful state-owned commercial banks.

2. Literature Review

One factor that determines the level of demand for e-banking services is that of the number of people having access to Internet. However, this is rather difficult to estimate due to the dispersed nature of usage. The actual number of users could vary widely as there are likely to be multiple users, for each of the registered subscribers. Several other consumer behaviors related issues would affect the consumer preference and loyalty towards adoption of e-banking. Social psychology and marketing research indicate the customers differ in the type of relationship they wish to maintain with service providers such as banks. Clark and Mills (1993) concluded that while some individuals may desire to establish relationships that are more personal and friendship-like (communally oriented customers), there may be others who value efficiency of services and prefer more impersonal association (exchange oriented customers). This implies that customers, who desire social and psychological benefits by establishing personal relationships with banks, will prefer face to face interactions. E-banking environment will, thus, have a detrimental effect on such consumers. On the other hand, for those customers whose relationship is primarily rooted in efficiency of services, e-banking environment will be a perfect alternative.

The financial system of Bangladesh is comprised of formal sector, semi-formal sector and the informal sector. In Bangladesh, government's policies and programs are formulated to accelerate inclusive economic growth backed by Bangladesh Bank's financial inclusion strategy (Siddique *et al*. 2010). Achieving a higher financial inclusion level is more severe and it has become a global challenge in the developing countries (Ardic *et al*. 2011).

Many researchers suggest that customers differ in the type of relationships they intend to maintain with their service providers and have both functional and social benefits. Empirical evidence in communications suggests that the choice of communication channel will have effect on the development of relationships. Turoff and Hiltz (1988) & Hiltz *et.al* (1986) found that computer mediated communication is less personal and socio-emotional than face to face exchanges. Another research on the Information Richness theory points out that face to face communication is a better medium to transmit complex messages which is essential to establish personal contacts. Tomiuk and Pinsonnault (2001) propose that the lesser degree of richness and sound presence of e-banking environment, the significant effect it will have on the banks' ability to create a trusting relationship between their customers.

Rogers and Shoemaker (1971) assert that consumers go through several stages in knowledge conviction and decision confirmation before they finally adopt a product of service. Guiltin and Donnelly (1983) emphasized on the importance of awareness before adoption of any innovative products. Malaysian banks appear to have taken a cue from this, as the strategy of most of the banks have been to create wide spread awareness through its informational websites, before launching onto a full scale transactional websites. Customer confidence on e-banking would also largely depend on how the banks would deal with any erroneous transactional and security concerns that may occur during online banking. Stewart (1999) claimed that the failure of the Internet in retail banking is largely attributable due to the lack of trust consumers have in the electronic channels. Datta (2021) conducted a research on the relationship between cashless banking and bank's profitability of Bangladesh and found that there is a positive relationship among ROA, ROE and cashless banking.

Daft and Lengel (1986) added that proper navigational attributes and search facilities, which lead to higher level of interactivity, will have an impact on the customer perception on user friendliness of the e-banking site. Doll *et.al* (1995) observed that provisions of infra structural facilities could be another factor that could lead to quicker diffusion of innovation. They also revealed that there is a significant correlation between the website downloaded speed and web users 'satisfaction.

Gakii (2012) observed the factors determining the use of three types of mobile financial services such as mobile payments, mobile money transfers, and mobile banking in Kenya by applying a multinomial logit model considering age, gender, and education level, tariff of service, and volume of transactions as explanatory factors. The study revealed that the use of mobile payments and mobile banking depends on gender, education, and wealth of individuals as well as the tariffs of service and volume of transactions. Andrianaivo and Kpodar (2011) conducted a study on information and communication technology (ICT), financial inclusion, and growth with evidence from African countries. They used a sample of African countries from the year 1988 to 2007 and shown the mobile phone rollout as an impact of information and communication technologies (ICT) on economic growth. Again recently Datta (2021) showed that there is a positive relationship between bank branches and active mobile money accounts which were used as the proxies of financial inclusion and GDP of Bangladesh.

Sarma and Pais (2011) empirically intended to evaluate the relationship between financial inclusion and development by identifying country specific factors that are associated with the level of financial inclusion and revealed that among socio-economic and infrastructure related factors, income, inequality, literacy, urbanization and physical infrastructure for connectivity and information are important. Saluja (2012) focused at the altering definition and role of the Micro, Small and Medium Enterprises (MSME) towards the growth story of India's economy. According to him, in India, after agriculture, the MSME sector is the second largest manpower employer and the output from this sector alone constitutes 40 percent share of the value added in the manufacturing sector and one third of national exports. Swamy (2014) examined the question: 'In the context of gender dimension what is the evidence of the impact of the financial

inclusion programs on poor households represented by women relative to that represented by men?' For this study he used the difference-in-difference estimator approach and found that income growth (CAGR) net of inflation effect was 8.40% for women as against 3.97% for men. Malady (2016) argued that due to lack of consumer trust and confidence in the new channels consumers in many emerging markets are not active users of the digital channels, although they may have digital banking credentials to access the digital financial system.

Based on the above reviews of the literatures, it might be said that there are no outright studies regarding the dominating factors that can affect the choice of the customers of public commercial banks in Bangladesh. We conclude that consumer's preference for e-banking and their loyalty will not only be dependent upon the availability of internet service but on several other social and psychological factors such as reluctance to change, trust and relationship in banker, cost of computers, internet accessibility, convenience of use, and security concerns. Several other theories relating to consumer behavior affect the rate of adoption and degree of acceptance of any innovative service like e-banking.

3. Methodology

3.1. Sample and Data

The study is mainly based on the primary data source. In this study, total population was 1200 and 30 sample size was taken randomly from the Rupali Bank, Chehelgazi Branch. The author considers those clients who have had some educational background and income sources. To determine the customer's preference for e-banking, a survey was conducted to collect data by constructing a questionnaire based on six variables. Respondents were asked to rank their preferences for each of the variables that they believed as influential to e-banking adoption. Retail users of banking services of Rupali bank, Chehelgazi branch, participated in the survey. A total of 25 usable responses were obtained. Respondents were given a five-point scale to answer the questions of each variable. Some demographic questions were also asked for more interpretation of responses. Collected data were analyzed by the data analysis software SPSS.

3.2. Research Method

This study has considered two independent groups of customers, namely- E-banking user and conventional user, to find out the influential factors from among six factors such as, accessibility of internet, reluctance to change, security, convenience, ease to use, and cost. Since the aim is to examine the difference between two unrelated (independent or unpaired) or sets of measurements, this study used 'Independent Sample t-test' to analyze the factors.

4. Results and Discussion

4.1. Survey Results

Demographic Characteristics	E-Banking Users	Conventional Banking Users
Mean age	21-30	Above 30
Mean monthly income	10000-30000	10000-30000
Percentage of graduates	28.57%	78%

Table 1: Demographic Characteristics of the Respondents
Source: Survey Data

Table 1 provides an outline of the Rupali bank customer's demographic characteristics and their preference for e-banking. Among the respondents, just one demographic trait, which is monthly salary, was found to be identical in both cases. Among the respondents, 72% are male and 28% are female. 60% respondents are graduates; in this portion almost 70% respondents belong to older generation. It clearly indicates that age actually affects. Customers from young generation are quicker to adopt with the trend. [N.B: All the respondents under consideration have some educational background]

Question 1: It's Easier for Me to Access the Internet							
		It's easier for me to access internet					
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
USER TYPE	E-Banking	0	0	0	3	11	14
	General/Conventional	6	1	2	2	0	11
	Total	6	1	2	5	11	25

Table 2: Descriptive Results of Accessibility of E-Banking
Source: Survey Data

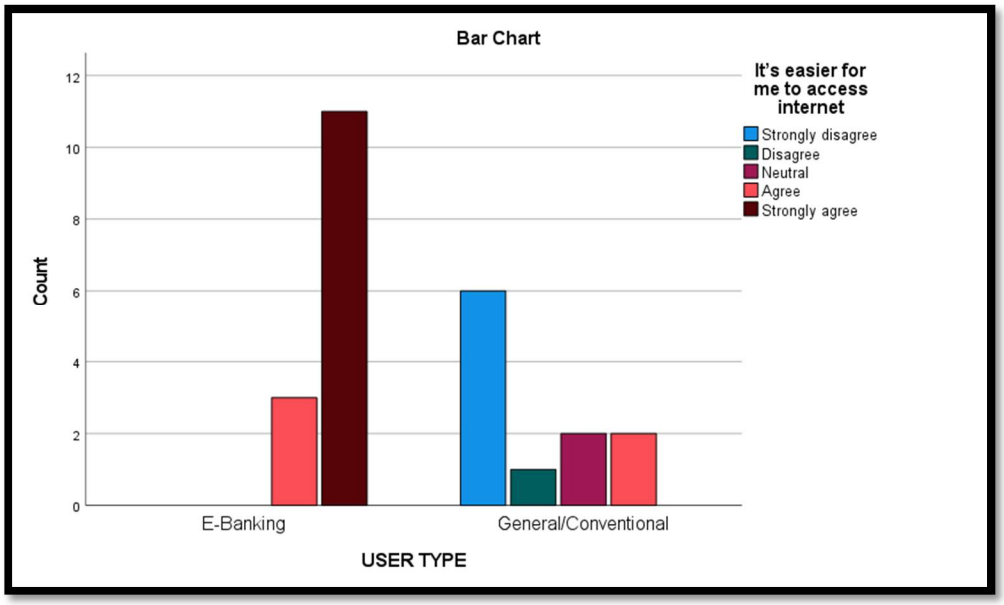

Figure 1: Accessibility of E-Banking

Figure 1 clearly shows that 54.54% customers are using general banking services as they strongly disagree and are not used to access internet. That is why, they preferred conventional banking services.

Question 2: My attitude towards adopting modern technology						
		My attitude towards adopting modern technology				
		Disagree	Neutral	Agree	Strongly agree	Total
USER TYPE	E-Banking	0	0	1	13	14
	General/Conventional	2	5	3	1	11
	Total	2	5	4	14	25

Table 3: Descriptive Results of Reluctance to Change
Source: Survey Data

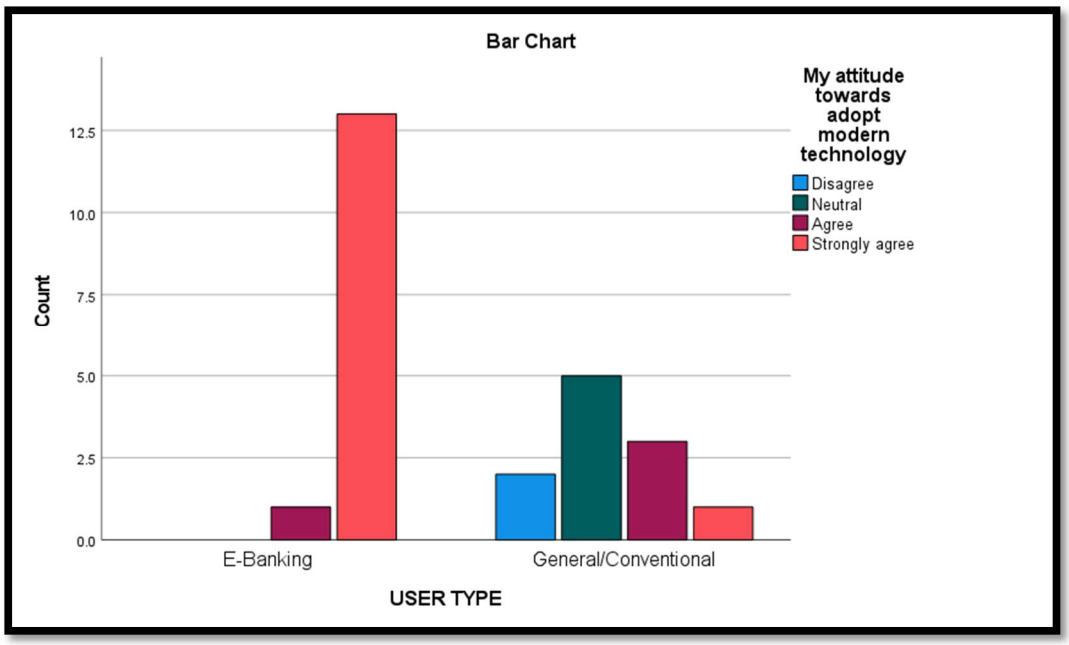

Figure 2: Reluctance to Change

Figure 2 shows that customers, who are using e-banking services, are highly adaptable than general or conventional customers. Almost 93% of the respondents from e-banking users strongly agree with this.

Question 3: I would find E-Banking services secured							
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
USER TYPE	E-Banking	0	0	3	9	2	14
	General/Conventional	7	3	1	0	0	11
Total		7	3	4	9	2	25

Table 4: Descriptive Results of Security of E-Banking
Source: Survey Data

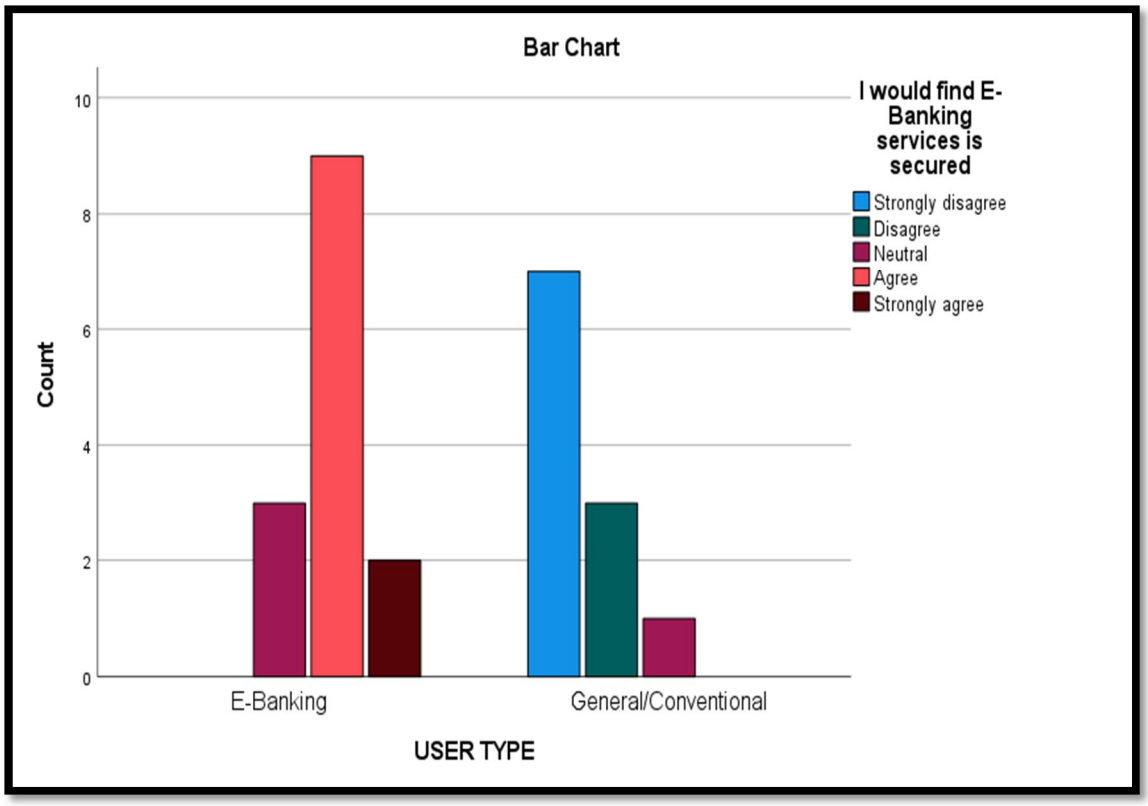

Figure 3: Security of E-banking

Figure 3 shows that 90.90% respondents of conventional customers are concerned about security which is remarkable and can be a major constrain that significantly affects the usage of e-banking services.

Question 4: I would find E-Banking services more convenient							
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
USER TYPE	E-Banking	0	0	0	2	12	14
	General/Conventional	0	5	6	0	0	11
Total		0	5	6	2	12	25

Table 5: Descriptive Results of Convenience of E-Banking
Source: Survey Data

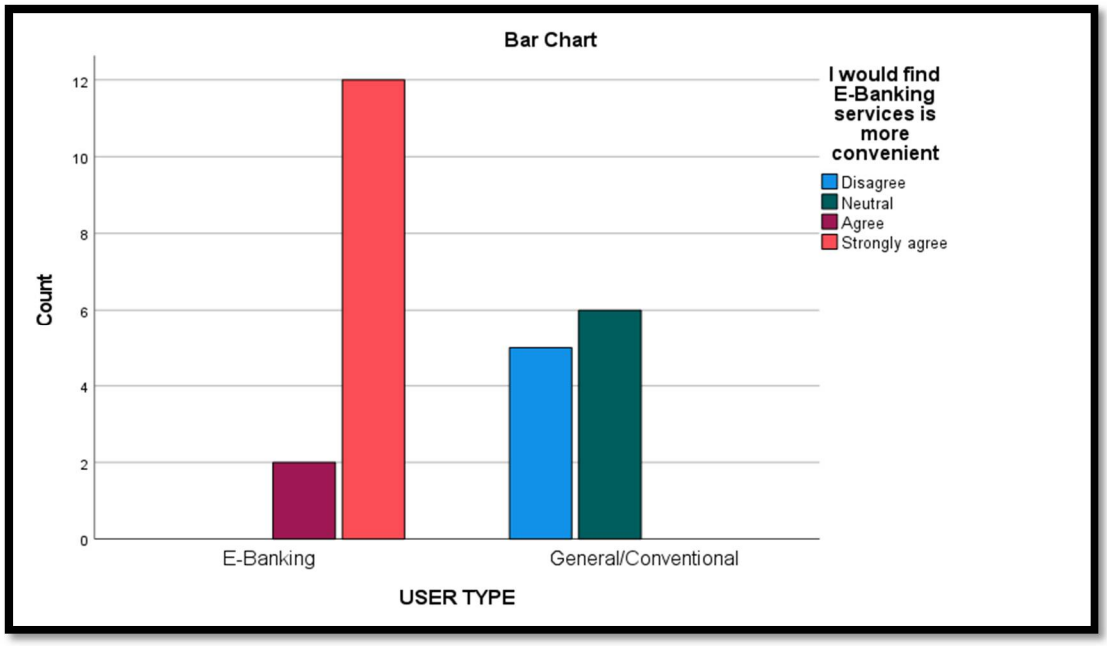

Figure 4: Convenience of E-banking

Figure 4 shows that 100% respondents from e-banking user group responded that e-banking services are highly convenient to them. On the other hand, from conventional user group, 45.44% respondents disagree with the statement.

Question 5: Using the E-Banking services is easy for me						
		Strongly disagree	**Disagree**	**Agree**	**Strongly agree**	**Total**
USER TYPE	E-Banking	3	0	2	9	14
	General/Conventional	6	2	3	0	11
Total		9	2	5	9	25

Table 6: Descriptive Results of Ease of E-banking
Source: Survey Data

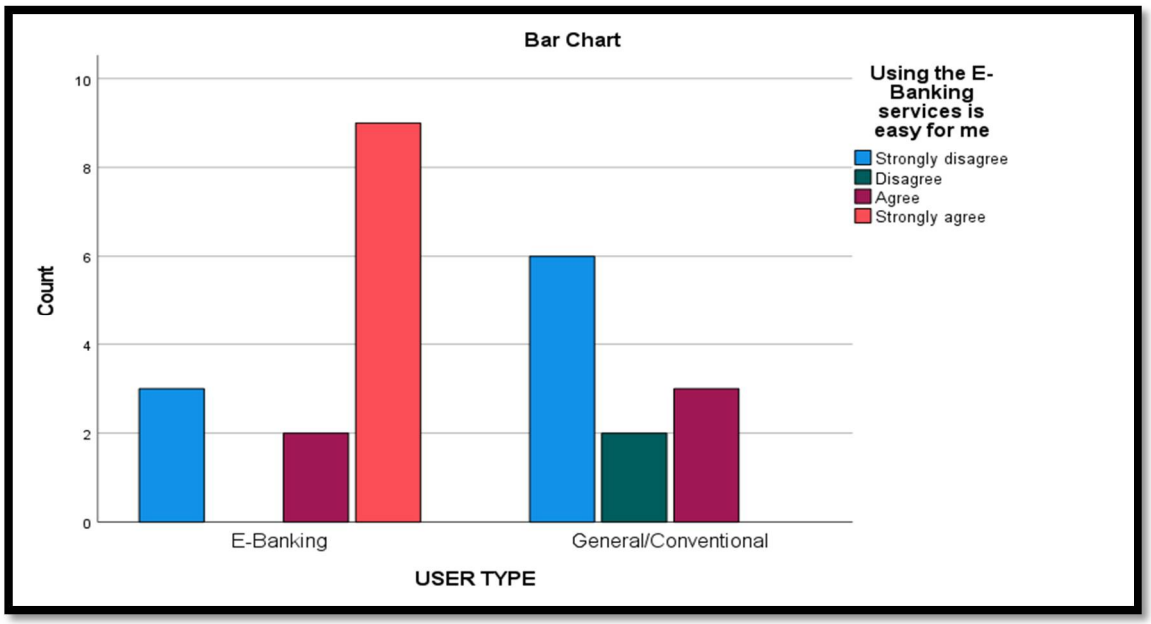

Figure 5: Ease of E-Banking

From Figure 5, it's clear that 72.72% general customers feel that use of e-banking services is not easy and as such it may be another constraint for them to use e-banking services. Whereas, 78.52% respondents from e-banking user group feel that e-banking services are easy to use for them.

Question 6: I can afford computer and internet connection					
		Neutral	Agree	Strongly agree	Total
USER TYPE	E-Banking	4	1	9	14
	General/Conventional	2	8	1	11
Total		6	9	10	25

Table 7: Descriptive Results of Cost of E-Banking

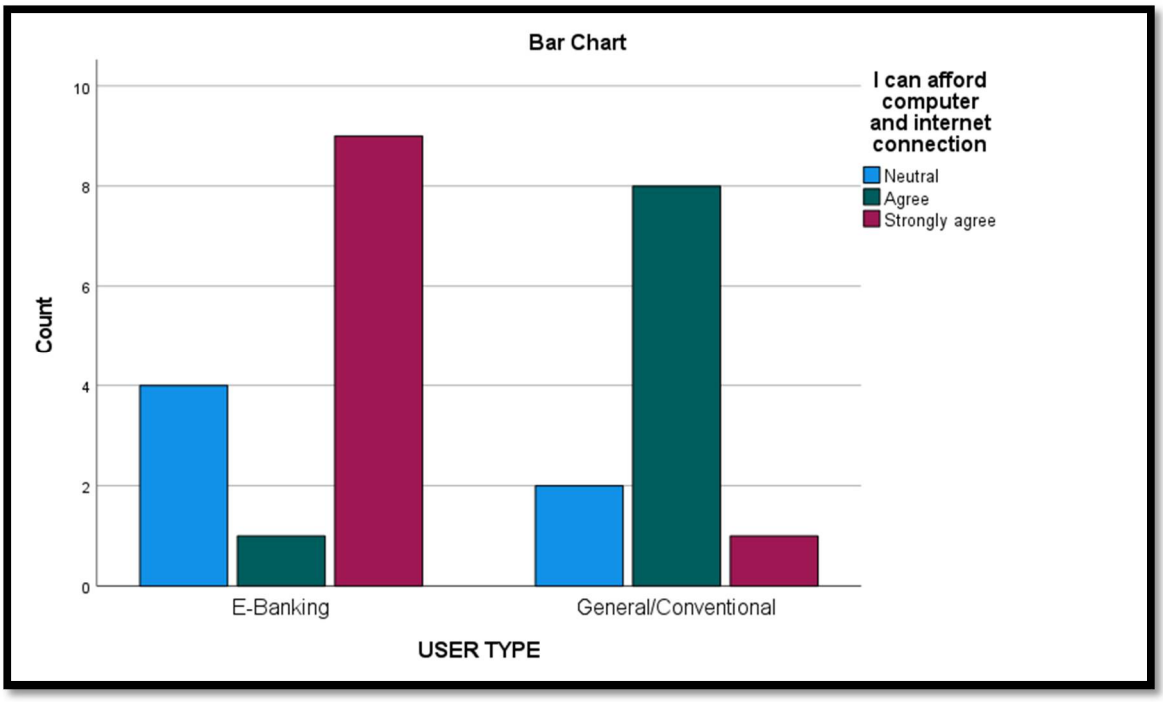

Figure 6: Cost of E-banking

Figure 6 shows that approximately 76% among all the respondents from both groups feel that they can afford computer and internet connection. The cost is not a big issue for them.

Group Statistics				
	USER TYPE	N	Mean	Std. Deviation
It's easier for me to access internet (Accessibility)	E-Banking	14	4.78	.425
	General/Conventional	11	2.00	1.26
My attitude towards adopting modern technology (Reluctance to change)	E-Banking	14	4.92	.267
	General/Conventional	11	3.27	.904
I would find E-Banking services secured (Security)	E-Banking	14	3.92	.615
	General/Conventional	11	1.45	.687
I would find E-Banking services more convenient (Convenience)	E-Banking	14	4.85	.363
	General/Conventional	11	2.54	.522
Using the E-Banking services is easy for me (Ease to use)	E-Banking	14	4.00	1.66
	General/Conventional	11	2.00	1.34
I can afford computer and internet connection (Cost)	E-Banking	14	4.35	.928
	General/Conventional	11	3.90	.539

Table 8: Descriptive Statistics on the Attitudes towards E-Banking
Source: Survey Data

Table 8 shows the mean and standard deviation of each variable for both the two groups. As predicted, the mean of E-banking user is higher than conventional user. So, there are differences in mean between two groups. This study considers the five point Likert scale. The value of mean from 1 to 1.8 indicates strongly disagree; the value of mean from 1.81 to 2.60 indicates disagree; the value of mean from 2.61 to 3.40 indicates neutral; the value of mean from 3.41 to 4.20 indicates agree; and the value of mean from 4.21 to 5 indicates strongly agree.

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T-value	Sig. (2-tailed) or P-value	Mean Difference
Accessibility	Equal variances assumed	21.90	.000	7.73	.000	2.78
	Equal variances not assumed			6.99	.000	2.78
Reluctance to change	Equal variances assumed	14.31	.001	6.53	.000	1.65
	Equal variances not assumed			5.87	.000	1.65
Security	Equal variances assumed	1.22	.279	9.47	.000	2.47
	Equal variances not assumed			9.34	.000	2.47
Convenience	Equal variances assumed	9.94	.004	13.05	.000	2.31
	Equal variances not assumed			12.49	.000	2.31
Ease to use	Equal variances assumed	0.30	.588	3.24	.004	2.00
	Equal variances not assumed			3.32	.003	2.00
Cost	Equal variances assumed	10.38	.004	1.41	.169	.448
	Equal variances not assumed			1.51	.146	.448

Table 9: Results of Independent Sample-T Test
(N.B: Used 5% Level of Significance)
Source: Survey Result

Table 9 shows the results of independent sample-t test for assessing the factors behind choosing the e-banking services. From Levene's Test for equality of variances it is found that Accessibility, Reluctance to change, Convenience, and Cost variables are significant but not assuming the equal variances as the p-value of these factors are less than 0.05. Since the p-value of the variable Security and Ease to use is greater than 0.05, these variables are significant by assuming the equal variances.

Again from the results of t-test for equality of means between two groups, it is observed that all the factors except the cost variable ($p > 0.05$) are significant at the 5% level of significance for either assuming or not assuming the equal variances. It is also found that all the variables have a mean difference which is the main assumption of testing the independent sample-t test. Therefore, it can be said that all the variables except cost have a significant impact on the decision of the customers regarding the uses of E-banking services from Rupali Bank Limited.

5. Conclusion

This study revealed that internet accessibility, awareness, attitude towards change, security concerns, ease of use and convenience are the major factors affecting the adoption of Internet bank services in Rupali bank. The demographic differences between Internet bank users and the non-users are very evident in this study, particularly with reference to age. However, in view of the security concerns and the risk involved in e-banking transactions, the more affluent members of the sample appear to have a greater declination towards e-banking. Furthermore, the fact that 56% of the sample respondents had already adopted e-banking services, it is encouraging and indicative of a bright future for e-banking in Bangladesh.

To ensure customers regarding their e-banking security and privacy, Banks can arrange seminar or prepare a marketing team. Banks should adopt or use an easier interface for providing e-banking service so that people for whom e-banking is difficult can use this service as well. Again by offering attractive packages, they can influence those customers who are reluctant to change their attitude for using e-banking. Moreover, they can arrange seminar and other motivational offers for their older customers to motivate them to use e-banking services. The findings of this study can be used by central bank for policy formulation, financial institutions to develop new products and services. This will also help the academicians and researchers in their respective fields.

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