

# Consumers attitude towards Internet banking services in an underdeveloped country: A case of Pokhara, Nepal<sup>☆</sup>

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## ABSTRACT

The application of Internet technology has created enormous impact on banking sector with the implementation of many techno-oriented services like Internet banking, EFT, branchless banking, Automated Clearing House (ACH) transactions etc. Study of customer's attitude in terms of trust, perceived risk and ease of use of a particular technology is as an important parameter for acceptance or rejection of a technology. To explore the customers' attitude for Internet banking this research is undertaken. The research is carried out in Pokhara valley which is the second largest city and tourism capital of Nepal. The study employs descriptive research design with stratified sampling procedure for eight top commercial banks. A set of 25 customers is taken from each selected 8 banks making a sample size of 200 respondents. A fixed set of question related to demographic factors is provided personally or by visiting the location of the customers of Internet banking service and collected accordingly. Reliability test is performed using Cronbach's alpha and data is analyzed using inferential statistics to present the results of the study. This study provides knowledge on the current scenario of Internet banking and helps banks in cost saving, mass customization, product innovation, improved marketing and communication. This study is very important for financial institutions like banks, government agencies and business houses to understand the perception of customers towards Internet banking and technology as a whole. The study also supplements the gap in literature on technology and banking in Nepal and serves as an important knowledge base.

☞ keyword : Internet banking, customer attitude, technology acceptance, banking services, Pokhara, Nepal

## 1. Introduction

Banking is the heart trade of commerce industry and the most dynamic part of economy which collects unused fund and mobilizes it in needed areas. Banking industry is advancing around the world with the use of information technology and becoming more competitive with new products, services and better facilities for its customers[1]. The adoption of information and communication technology in banking is widely referred to as electronic banking (E-banking) [1]. The technology has helped banking industry

to attract potential customer, retaining the existing ones and integrate business houses for new services with real-time transactions. Internet banking has both advantages as well as disadvantages. The advantages of internet banking includes saving of cost, saving of time, instant transaction and quick availability of information to the customer [2]. The disadvantages include feeling of uncertainty caused by third party (hackers), virtual mode operation and banking frauds [3]. Besides both the advantages and disadvantages, banking industry is unable to resist the demand for technological services and products.

Pokhara is the second biggest city of Nepal. It is a tourism city and banking industry finds a lot of business prospect and application of its services in this city. There are around 50 banks that operate in the city, including the development and commercial banks [4]. Many technological services have been welcomed in the recent past by the customers of this city and there are rising demands for new kind of digital services. Internet banking introduced few years ago is a new kind of banking service introduced based

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on digital technology. With regard to new technology acceptance, unless the specific need of a consumer is full-filled, consumers may not be prepared to change from present familiar ways of operating finance [5]. In the context of online, mobile banking and traditional retail branches, whether consumers will adopt new technology -based delivery channels, depends on their attitudes towards each of these channels[6]. Therefore, the study of attitude is an important aspect to know about internet banking in Nepalese context too.

## 2. Problem Definition

Customers form the basis of any business and acceptance of a product or a service is totally dependent on customers perception and attitude towards it. Customers' attitudes and motives are widely studied areas to understand the relationship of technological products and services with consumers and their institutions [7]. In the context of Internet banking and traditional banking, whether consumers would adopt new technology - based delivery channels depends on their attitudes towards each of these channels [1]. Combining research of customers attitude with online banking has a great significance to understand current status and trends of use of Internet banking and service for better product development and implementation. In addition, this study aims to find out the demographic factors of the internet banking user and its effect on consumer attitudes and fullfill the gap in the literature. Given these predispositions, the study looks at consumer behavior, attitude and motivation in the light of technology acceptance for Internet banking in Pokhara Valley.

### 2.1 Objective of the study

The focus of this study is to identify the common Internet banking adoption dimension underpinnings such as perceived ease of use, perceived usefulness and perceived risk, towards consumer behavior. The work fulfills the following objectives which include:

1. To analyze the demographic characteristics of the users of internet banking.
2. To analyze the customer attitude in terms of perceived usefulness.
3. To analyze the customer attitude in terms of perceived risk.
4. To analyze the customer attitude in terms of perceived ease of use.

## 3. Literature review

Banks started to invest in information technology to improve their product and services offered to the customer and also increase their productivity and efficiency of the business [8]. The research shows that using a new kind of technology is affected by different theoretical model such as psychology and sociology. Among the various model, Technology Acceptance Model (TAM) is used as a best model for studying internet banking acceptance [9]. This model involves two major determinants of the attitude towards using an adopting technology i.e. perceived usefulness and perceived ease of use of technology [9][10]. This model postulates that the use of an information system is determined by the behavioral intention of a consumer on one hand and the behavioral intention is determined by the person's attitude towards the use of the system and its utility on the other [9][10]. Technology Accepted Model is introduced by Davis is an adaption of the theory of reasoned action (TRA) specifically tailored for modeling user acceptance of information system [10]. The goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified[9][10].

Consumer attitude is a complex term that is a conjunction of two words i.e. "consumer" and "other attitude" [11][12][13]. Consumers are those who consume the goods or services that are offered to them. In context of consumer learning, attitude refers to consumer's feeling of like or dislike about a product or service offering and the marketing mix. Attitudes are composed of three components: (a) a knowledge or cognitive, (b) a feeling and affect and (c) a behavioral and cognitive [14]. Customer attitude leads to

perceived risk reduction which builds confidence and creates a striking influence on user willingness to engage in online exchanges of money and personal sensitive information thus leading to internet banking adoption [12][13]. Moreover the self-assisted channels where users can access banking service via the public wireless Internet empowers user in terms of time and accessibility [15][16].

(Table 1) Scenario of Modern Banking System of Nepal, data report of NRB 2018/19 Source(19).

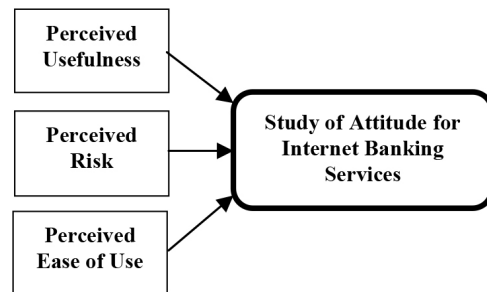
S.N.	Particulars	2019/10
1	Number of branchless banking center	1,559
2	Number of branchless banking customer	1,11,670
3	Number of mobile banking customer	90,00,000
4	Number of Internet banking customer	7,80,000
5	Total number of ATM	2,426
6	Number of debit card holder	62,80,000
7	Number of credit card holder	112,756

The banking system in Nepal started with the establishment of first bank, the Nepal Bank Limited (Government Sector Bank) in 1937. Nepal Rastra Bank, the central bank was established in 1956 A.D. followed by the formulation of Nepal Rastra Bank Act 1955 which makes various guidelines for the banking sector of the country. The evolution of Joint Venture Bank in Nepal was in 1984 that laid the foundation for e-banking. Nepal Arab Bank Limited (now NABIL BANK), was first joint Venture Bank which introduced e-banking system in Nepal by the introduction of the Credit Cards in early 1990 [17]. Mercantile Office System was first ISP established in Nepal in 1994 and the first ATM was launched by Himalayan Bank Limited in 1995. Tele-Banking facility was first introduced by Kumari Bank Limited in 2002. Laxmi Bank Limited was the first bank to introduce SMS-Banking (or Mobile Banking) in Nepal in the year 2004. The basis of customer relationship changed in the country from traditional banking to digitization through introduction of ATM (Automatic Teller Machine), credit card and debit card [17]. Today, the banking sector is more liberalized, modernized and systematically managed due to technology and operates with specialized

banking software offering services like ATM, E-banking, Mobile Banking, Debit Card, Credit Card, Prepaid Card etc [18]. The current scenario of modern banking system is depicted in table 1 [19].

#### 4. Theoretical Framework

Based on the conceptual framework, the basic framework for this study is shown in the figure 1 below. The model considers 3 attributes that are effective on the customer’s attitude towards internet banking as shown in Fig. 1. With the help of Internet banking users of Nepalese commercial banks, the relationship between them (Customers and Banks) is identified, analyzed and examined to help the financial institution built an understanding of the current scenario.



(Figure 1) Research Framework

#### 5. Research Methodology

This study follows a survey research design which intends to evaluate the customer’s attitude towards using internet banking service offered by banks of Pokhara valley of Nepal. The respondents of the study are the customers using internet banking facilities of commercial banks located in Pokhara valley. Descriptive research design with inferential statistic is used and reliability of data is checked using Cronbach’s alpha coefficients for the three attributed under investigation. The analysis is done on the basis of the data tabulated and analyzed both descriptively and statistically with the help of SPSS and MS Excel. The population of this study consist of Internet banking customers of commercial banks living in Pokhara Valley. A population size of 200 samples is undertaken for the study. A set of questionnaire consisting 30

questions related to demographic factors such as gender, income level, highest level of education and occupation, question related to perceived usefulness, perceived risk and perceived ease of use have been distributed to respondents. For statistical analysis, required tools such as frequency, percentage distribution and chi-square have been adopted. Similarly, frequency tables and table related with hypothesis testing and other responses are clearly highlighted in order to achieve reliability from the study.

## 6. Data Analysis and Findings

The section below represents that data compiled from the survey and is represented in the form of tables and graphs. A textual description is used to explain the data.

### 6.1 Reliability test

Reliability test measures the internal consistency of a measure of the data collected. The internal consistency of the scales is measured using Cronbach's coefficient alpha where the coefficient having value above 0.5 is considered as accepted. It was noted that values for Perceived Usefulness, Perceived Risk and Perceived Ease of Use were all above 0.5 and hence proved the reliability of the research as shown in table 2, 3 and 4.

(Table 2) Anova test for Perceived Usefulness

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	441.77	199	2.219	3.997	1.64E-52	1.1851
Columns	278.37	7	39.76	71.56	1.69E-88	2.0161
Error	774.12	1393	0.555			
Total	1494.2	1599				

*Cronbach's Alpha for Perceived Usefulness = 0.749673*

(Table 3) Anova test for Perceived Risk

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	464.1772	199	2.33254	3.5306	2.98E-44	1.18333
Columns	70.01	8	8.75125	13.246	1.15E-18	1.94420
Error	1051.768	1592	0.66065			
Total	1585.955	1799				

*Cronbach's Alpha for Perceived Risk = 0.716766*

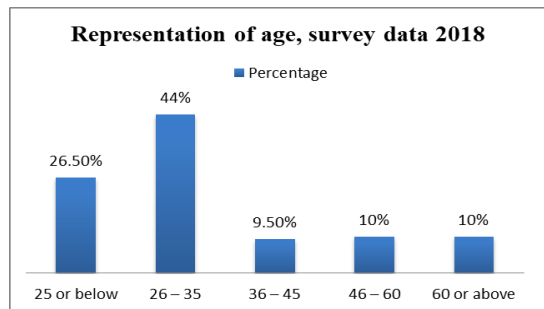
(Table 4) Anova test for Perceived Ease of Use

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	464.1772	199	2.33254	3.5306	2.98E-44	1.18333
Columns	70.01	8	8.75125	13.246	1.15E-18	1.94420
Error	1051.768	1592	0.66065			
Total	1585.955	1799				

*Cronbach's Alpha for Perceived Risk = 0.716766*

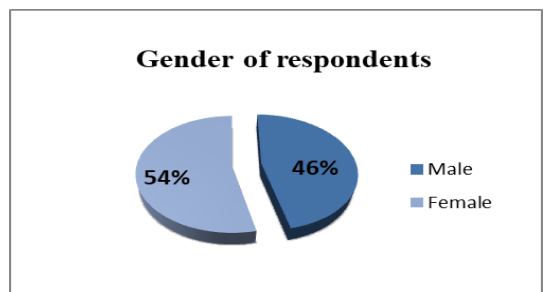
### 6.2 Respondents demographical data

The demographic variables of this study include age, gender, income, education and occupation. It has been widely seen that demographics factors have a great impact on consumer's attitudes and behavior regarding online banking.



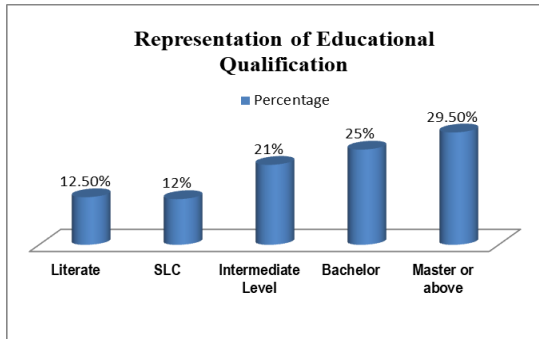
(Figure 2) Representation of age variables of the respondents. Source: Survey data 2018

Figure 2 above shows that 44% of the respondents are from the age group of 26-35, 26.5% are 25 or below 25 while other age groups have 9.50%, 10% and 10% respondents respectively. The data shows that younger people are more inclined to internet banking compared to other age groups.



(Figure 3) Representation of gender variable of the respondents. Source: Survey data 2018

The gender is an important variable to find out which group among the males and females is more technology oriented. The survey data showed that 54% Internet banking customers were female as shown in the figure 3 above. This contributed to the fact that females are more inclined towards technology in the Pokhara valley.



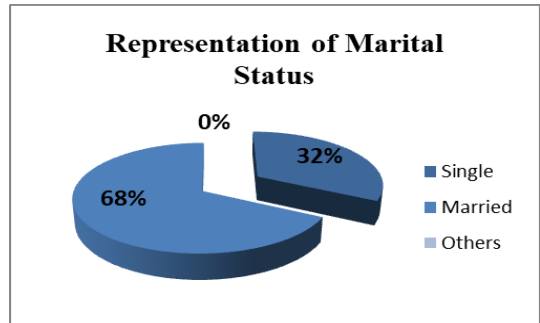
(Figure 4) Representation of education status of the respondents. Source: Survey data 2018

Education is a crucial factor for usage of any technological innovation, It was seen from that data shown in figure 4 that 29.5% of respondents were holding Master degree, 25% were holding bachelors, while 21 % had atleast high school. 24.5% of the other population also had some education as shown. This infers that educated people are more interested to use internet banking and that too with a good educational background.

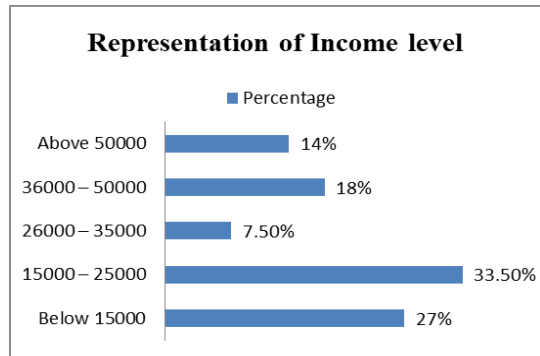
The figure 5 below represents marital status of the respondent. Out of total respondent, 67.50% of them are married while 32.50% of them are single. It indicates that married respondents favour the internet banking more compared to single ones which is a good sign for growth of such services in future.

The level of income data revealed that Income level from Rs.15,000-20,000 has high majority i.e. 33.50% in using the internet banking. Likewise, the income level of below Rs. 15, 000, Rs. 36, 000 -50, 000, above Rs. 50, 000.00 and Rs. 26, 000 - 35, 000 has 27%, 18%, 14% and 7.5% respectively as shown in figure 6 below.

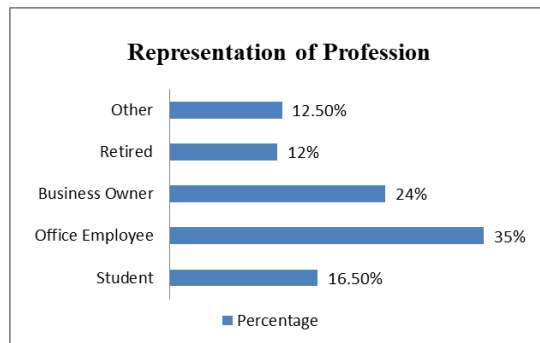
The data regarding profession (occupation) percentage of respondents using the internet banking reflected that 35.5% were office employee, 24% were business owners and 16.5 %



(Figure 5) Representation of marital status of the respondents. Source: Survey data 2018



(Figure 6) Representation of income level of the respondents. Source: Survey data 2018



(Figure 7) Representation of profession of the respondents. Source: Survey data 2018

made the student number. The 24.5 % included the retired and other categories. The majority percentage of working and business owners using internet banking is a positive inclination for the use of this technology by these group of

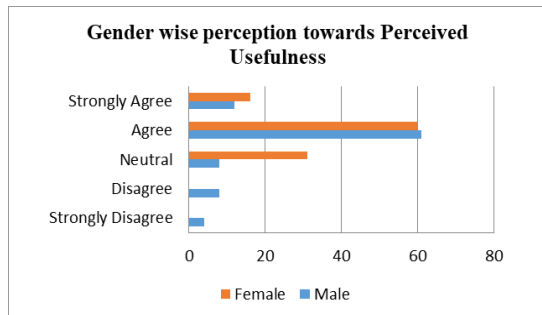
people as shown in figure 7.

### 6.3 Perception towards reliability and convenience

The measure of reliability and convenience of a technology keeps a great value in the success of that particular technology. The perception with respect to gender, education and occupation are strong variables considered to understand this aspect. The section below considers these variables to draw results and conclusion.

#### 6.3.1 Gender wise perception

The figure 8 represents gender wise distribution of respondent's perception towards internet banking on reliability and convenience. The data shows that out of 93 males and 107 females, 45 males and 37 females agree, 4 males and 17 females strongly agree while 73 remain neutral.



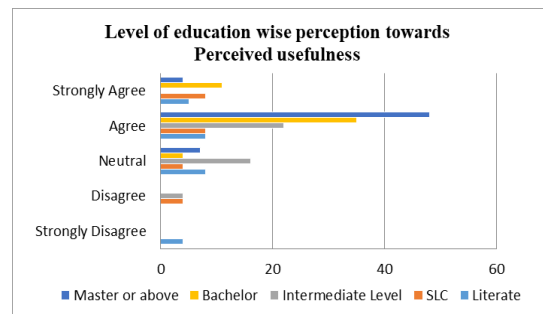
(Figure 8) Representation of gender and perceived usefulness, survey data 2018

A 52% of the population agree to the attribute while 36.5% remain neutral. In order to find out the significance of relationship a chi square test is performed which shows the p-value is 0.007 which is less than our level of significance i.e. 0.05. Therefore it can be said that there is sufficient evidence that there exist significant relationship.

#### 6.3.2 Education wise perception

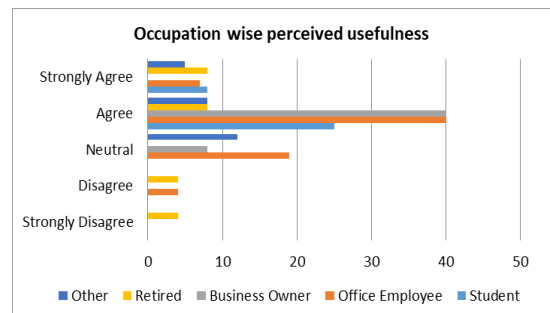
The study of education wise distribution of respondent's perception towards reliability and convenience depicted that 21 agreed strongly, 83 respondents (23 Masters, 21

Bachelors, 17 High School, and 12 with secondary school) agreed, while 73 remained neutral (21 Masters, 23 Bachelors, 13 High School, and 12 with secondary school) as shown in fig 9. A chi square test with p-value 0.000 showed that our level of significance is less than 0.05. Therefore it can be said that there is sufficient evidence that there exist significant relationship between the level of education of the respondent and Internet banking with security aspect at 5% significant level.



(Figure 9) Representation of education and perceived usefulness, survey data 2018

#### 6.3.3 Occupation wise perception



(Figure 10) Representation of occupation and perceived usefulness, survey data 2018

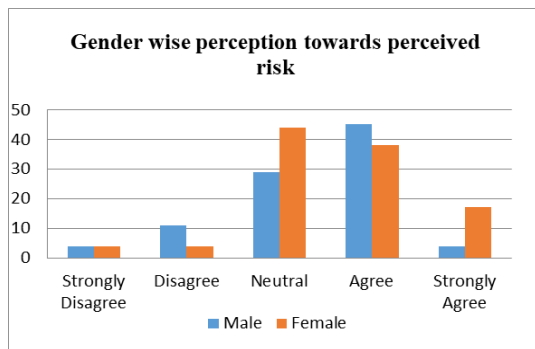
Occupation is an important parameter to consider while studying reliability and convenience of internet banking. The data as shown in fig 10 above depicted that, out of 70 office employee, 7 of them agree strongly, 40 agree, 19 are neutral and 4 respondents disagree. From the group of 48 business owners, 40 of them agree, 8 of them remains neutral. Out of

33 student respondent, 8 of them strongly agree and 25 of them strongly agree. The chi square values of p-value is 0.000 which is less than level of significance i.e. 0.05 states that there is sufficient evidence significant relationship between the occupation, reliability and convenience.

### 6.4 Perception towards confidence and security aspect

The measure of confidence and security in the usage of technology is one of the most vital measures. The section below considers these variables to study about Internet banking.

#### 6.4.1 Gender wise

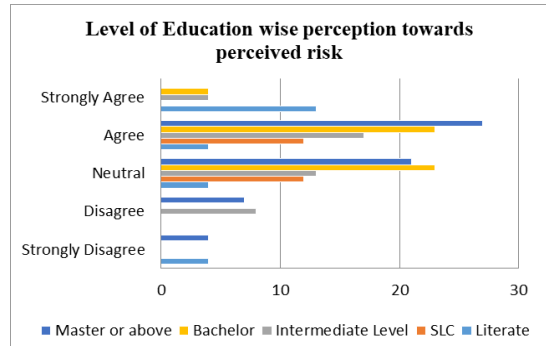


(Figure 11) Representation of gender and perceived risk, survey data 2018

The gender wise distribution of respondent’s perception towards Internet banking on perceived risk as confidence is a vital aspect. The data of fig 11 shows among 93 of the male respondents, 4 of the male strongly agree, while 45 male respondents agree, 29 male remains neutral, 11 male disagree and 4 of the male respondent strongly disagree. Among 107 female respondents, 17 females strongly agree, 38 agree, 44 remain neutral, 4 disagree and 4 female respondent strongly disagree regarding Internet banking as reliable and convenient.

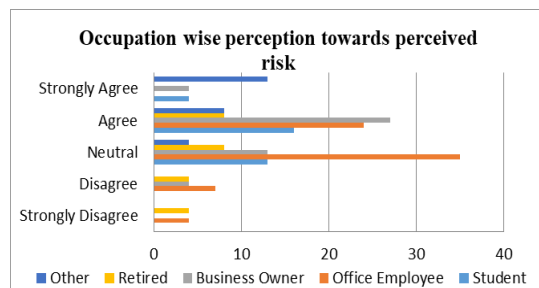
#### 6.4.2 Education wise perception

The study of education wise distribution of respondent’s perception towards risk and confidence concluded that out of



(Figure 12) Representation of education and perceived risk, survey data 2018

25 literate respondent, 13 of them strongly agree, 4 agree, 4 remain neutral and 4 respondent strongly disagree. Out of 24 SLC respondents, none of them strongly agree, next 12 of them agree, 12 of them remains neutral and none of them disagree. In the masters group of 59 respondent, 0 of them strongly agree, 27 of them agree, 21 of them are neutral, 7 of them disagree and 4 of strongly disagree as shown in fig 12. The result portrayed that there is a positive inclination of educated mass towards Internet banking.



(Figure 13) Representation of occupation and perceived risk, survey data 2018

#### 6.4.3 Occupation wise perception

Occupation wise perception represents that out of 70 office employee respondent, none of them strongly agree, 24 agree, 35 are neutral, 7 respondent disagree and 4 of them were strongly disagree. Out of 48 business owner respondent, 4 of them strongly agree, next 27 of them agree, 13 of them remains neutral and 4 of them disagree. From the 33 student respondent, 4 of them strongly agree, 16 of them agree, 13

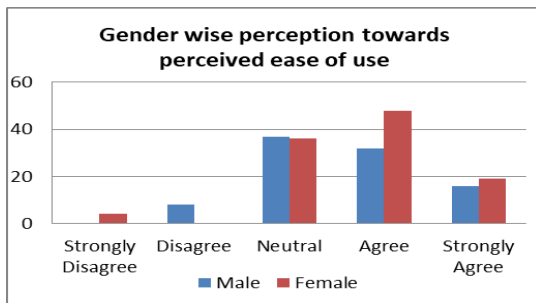
of the respondent were neutral and none of them were disagree and strongly disagree about confidence and security in internet banking(fig. 13). The confidence level from this data was seen low for office employees but the overall response was positive and majority mass had no opinions to share.

### 6.5 Perception towards ease of use and simplicity

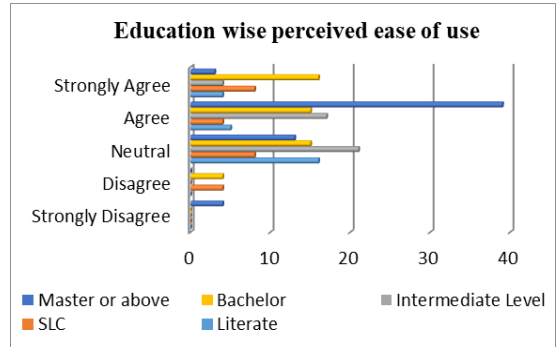
The measure of usability (ease of use and simplicity) decides how user friendly a particular technology is and it serves as the most important aspects to decide for technological success in business organizations. The study of this aspect is explored below.

#### 6.5.1 Gender wise

In case of ease of use and simplicity the data shows that among 93 of the male respondents, 16 of strongly agree, while 32 agree, 37 remains neutral, 8 disagree. Among 107 female respondents, 19 female respondents strongly agree while 48 agree, 36 of them are neutral and 4 female respondent strongly disagree regarding perceived ease of use and simplicity (figure 14). The gender wise distribution show that among 93 of the male respondents, 16 of the male respondents strongly agree, 32 agree, 37 remain neutral and 8 males disagree. Among 107 female respondents, 19 females strongly agree, while 48 female respondents agree, 36 of the female respondents are neutral, and 4 female respondents strongly disagree. This data showed that the overall population of the respondents was positive with females being more positive in this context.



(Figure 14) Representation of gender and perceived usability, survey data 2018



(Figure 15) Representation of education and perceived usability, survey data 2018

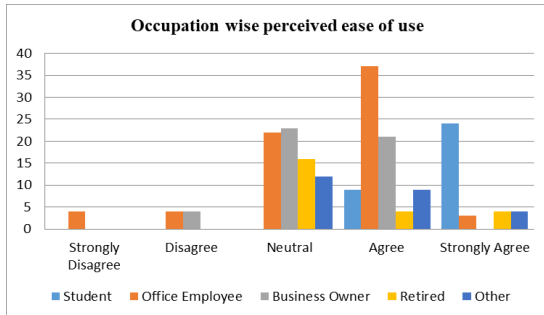
#### 6.5.2 Education wise perception

The level of education data fig. 15, shows that out of 25 literate respondents, 4 of them strongly agree, 5 agree, 16 neutral, none of respondents strongly disagree. Out of 24 SLC respondent, 8 of them strongly agree, next 4 of them agree, 8 of them remains neutral and 4 of them disagree. Out of 59 Master level respondent, 3 of them strongly agree, 39 of them strongly agree, 13 of the respondents were neutral, none of them disagree and 4 of respondents strongly disagree. The educated mass with atleast a bachelors degree and above looked more inclined and positive to technology compared to other levels.

#### 6.5.3 Occupation wise perception

The Occupation wise distribution data show that out of 70 office employee respondent, 3 of them strongly agree, 37 agree, 22 are neutral, 4 respondent disagree and 4 of them strongly disagree. Out of 48 business owner respondents, none of them strongly agree, next 21 of them agree, 23 of them remains neutral and 4 of them disagree. Out of 33 student respondents, 24 of them strongly agree, 9 of them agree, and no response was seen for other variables for Internet banking perceived ease of use as simple and easy, as shown in figure 16.





(Figure 16) Representation of occupation and perceived usability, survey data 2018

## 7. Findings and Conclusion

The data and analysis of the study concluded that that perceived usefulness, perceived risk and perceived ease of use have a direct influence on Internet banking adoption. The study explored customer's attitudes for internet banking services in commercial banks for Pokhara valley of Nepal. It identified the common internet banking adoption aspects based on technological acceptance model which included perceived usefulness in terms of reliability and convenience, perceived risk in terms of confidence and security, perceived usability in terms of ease of use and simplicity. These were further combined with gender, education and occupation to see the acceptance of Internet banking in different dimensions. The reliability test values provided a strong internal consistency measure with perceived usefulness value of 0.749673, perceived ease of use value of 0.638409 and perceived risk value 0.716766.

The study showed that users had a positive outlook and experience for the internet banking services in Pokhara, Nepal. The acceptance in all cases depicted that more than 50% of the population supported perceived usefulness, perceived risk, and perceived usability as positive for internet banking services. The next highest level of respondent group considered of neutral mass and very less of about 10-15% had some reservations. This data indicates that internet banking is accepted by the users of Pokhara valley Nepal.

The Chi-Square test performed showed that there is significant relationship between all three aspects perceived usefulness, perceived risk, and perceived usability in relation

to gender, education and occupation. In all cases the values attained were less than our level of significance i.e. 0.05. Thus showing a significant relationship between the variables under study. The data regarding the demography also indicated that young respondents with sound salary, good education, marital status and good income level were the users of internet banking. This stated that future implementation will also have a positive outlook and the current service will grow for more demand and better implementations. Though security and perceived risk did not had strong agreements, the majority of the mass remained neutral to offer any opinion on this aspect. The neutral mass is a positive sign for acceptance of technology with the rest of the majority agreeing to it.

The overall study concluded that Internet banking was accepted by the customers of Pokhara valley, Nepal and the scope and growth of this service has a positive outlook. Further, it also highlighted that the customers are happy with usefulness, security and usability of the current service. The output of the study definitely ensures the demand and utilization of technology as and when it is available as seen with Internet banking.

## 8. Limitation of the Study

The study is mainly concentrated on consumer's attitude towards internet banking inside the Pokhara valley. There are many internet banking users in Pokhara valley. Among them, only 200 users have been chosen as the sample of the study. The data analysis is largely dependent upon the primary data, so the accuracy of data depends mainly upon the reliability of the opinion of the respondents. The result and interpretation are completely rigid and from the view point of the researcher.

## 9. Recommendations

A further study of problems like malfunctioning, digital frauds, reliability of data online and security with internet and open connection must be studied to have a full understanding of the technology and provide detailed information to the bankers, security agencies and concerned

stakeholders.

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