CHAPTER I

INTRODUCTION

1.1 Background of the Study

A sound and effective banking system is the backbone of an economy. The economy of a country can function smoothly and without many hassles if the banking system is not only flexible but also capable of meeting the new challenges posed by the technology and other external as well as internal factors. Banking has always been a highly information intensive activity that relies heavily on information technology (IT) to acquire, process, and deliver the information to all relevant users. Not only is IT critical in the processing of information, it provides a way for the banks to differentiate their products and services. Banks find that they have to constantly innovate and update to retain their demanding and discerning customers and to provide convenient, reliable, and expedient services.

Driven by the challenge to expand and capture a larger share of the banking market, some banks invest in more bricks and mortar to enlarge their geographical and market coverage. Others have considered a more revolutionary approach to deliver their banking services via a new medium: the Internet. Since the introduction of the Internet in 1969, it has evolved from the sole domain of the computer nerd and the academic to a mainstream channel of communication. The emergence of Internet technology, particularly the World Wide Web has introduced new ways for doing business. Internet is increasingly used by the banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as Internet Banking, although the range of products and services offered by different banks vary widely both in their content and sophistication (Malhotra et al., 2014).

Technology adoption by users has become a crucial or significant measure of the success or effectiveness of that technology. Revolutionary development in Information and Communication Technology in the past decades has impacted individuals as well as businesses in intense way. Internet banking is a radical technological innovation with potential to change the structure and nature of banking.

Online banking is a new technology based, cost efficient, convenient and time saving channel for the customers as compared to traditional bank branches. Internet banking, online banking or E-banking allows customers of financial institutions to carry financial transactions on a secure website.

To access a BFI's online banking facility, a customer must be registered user of the institution and must have password for customer authentication. Internet banking is a system of banking in which customer can view their accounts details, pay bills and transfer money by means of internet. A customer can access his/her account anytime he wants over e-banking. E-banking has given birth to 24*7 banking, which earlier was just restricted to banking hours. Advances in electronic banking technology have created novel ways of handling daily banking affairs, especially via the online banking channel.

With the advancement in information and communication technology, banking sector worldwide provides Internet banking to offer customers easy access to banking services. Internet banking have created new ways of handling banking transactions and are also important for the banks in order to have the long-term survival. Internet banking is increasingly becoming popular because of convenience and flexibility. Under Internet banking customers perform their banking activities electronically over the internet through their personal computer or laptop at a time convenient to them, without having to be restricted to regular branch operating hours. (Mols, 2000) acknowledged that the Internet banking is an innovative distribution channel that offers less waiting time and a higher spatial convenience than traditional branch banking with significantly lower cost structure than traditional delivery channels. Internet banking reduces not only operational cost to the banks but also leads to higher levels of customer satisfaction and retention. As a result, Internet banking is very attractive to banks and customers, who are now adopting new technologies.

From the viewpoint of the consumers, the decision to use Internet Banking is frequently motivated by convenience and efficiency (Bruno, 2003). Online account holders do not have to make a trip to the local branch, queue, or be constrained by the bank's opening hours (Lassar et al., 2005). Furthermore, many banks try to lure customers into using Internet Banking by offering lower fees, or better rates on deposits and loans. Provision of such incentives is induced by the increasing competition in the market and enables the cost savings to be passed onto the consumer. Finally, many customers may be attracted to certain appealing features of online banking, such as better access to the information, speed of payment transactions or a sense of complete control over one's account (Black et al., 2001; Karjaluoto, 2002).

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. Pikkarainen et. al. (2004) investigates online banking acceptance in the light of the traditional technology acceptance model (TAM), and is leveraged into the online environment. Today each and every bank is providing this facility to its customers to encourage paperless banking and to provide banking facilities anytime anywhere. Fund transfer, utility payment, mobile recharge, online shopping and so on are the facilities provided by internet banking. Thus, Internet banking has major advantages of convenience and 24*7 services. It is fast, easy and efficient mode of banking.

However, the current trend of exclusively using the online mode to make all kinds of transactions has a few pitfalls which may prove costly in the long run unless guarded against from the beginning. Internet banking takes a toll on the relationship with the banker which the traditional visit to the branch office used to foster. Personal relationship with the staff at the banks comes handy when requesting for faster loan approval or a special service which may not be available to the public. There are also many complex transactions which cannot be sorted out unless there is a face to face discussion with the manager that is not possible through internet banking. Online communication is neither clear nor pin pointed to help resolve many complex service issues. Security is the biggest pitfall of the internet banking scheme which needs to be guarded against by the common customer. There is always a scope of hacking by smart elements in the cyber world. Such accounts have high risk of hacking. Thus, many customers still hesitate to adopt internet banking.

Online banking is definitely a significant move in the right direction as far as the convenience of the customer as well as the banker are concerned but it must be applied with adequate precaution to avoid falling prey to unscrupulous elements poaching the internet.

Bank can benefit from much lower operating costs by offering internet banking services, which require less staff and fewer physical branches. Customers will also benefit from the convenience, speed and round-the-clock availability of internet banking services. To realize the full potential of internet banking, bank need to develop new products and services to fully utilize the internet's capabilities. On the other hand, customers need to be made aware of internet banking services, and feel secure and comfortable with using such services as the new internet banking operating procedures are radically different from those they are used to. There is a clear need to study the factors that influence customers' intention to adopt internet banking so that banks can better formulate their marketing strategies to increase internet banking usage in the future. This study aims to investigate the behavioral intention of customers to use internet banking services with a focus on users' perceptions of ease of use and usefulness of internet banking, and the security of using this new technology to meet their banking needs.

The banking industry in Nepal has a vast canvas of history. Therefore, business in Nepal has been through a long journey. Today business is known as innovative business. The use of technology has brought an uprising in the working style of the banks.

BFIs are highly dependent on software and technology. Technology is changing day by day and changed technology affects the traditional method of the service of bank. Though banks are providing services like ATM, Mobile Banking, Debit Card, Credit Card and others, many customers are unaware with these services and understanding and utilizing of these services is very important for the economic development. Along with these services, using and understanding Internet Banking is one of the major factor in this globalized and rapidly developing era.

With the establishment of Nepal Bank Ltd. in 1937, the first bank to start banking in Nepal, it took nearly 53 years for the introduction of credit cards by the Nabil Bank Ltd. in early 1990s. As for the development of e-banking in Nepal, Himalayan Bank Ltd. stood in a front row with the introduction of Automated Teller Machine (1995) and Tele-banking. After the establishment of first bank, banking sector as well as bank customers have to wait nearly about 65 years for internet banking, and the

Kumari Bank Ltd. was the first to start the internet banking in Nepal in 2002 A.D. (Mishra, 2008). Then many banks started offering Internet banking services.

After sixteen years of introduction of Internet banking, it is still not popular in Nepal. People still rely on traditional ways of banking. Although the major cities like Kathmandu, Pokhara, Biratnagar have good internet facilities and majority of the bank provides the IB in urban cities but still IB is in its early stage and is not utilized by most of the bank customers. Reasons for not using internet banking might be because of less security, lack of awareness or illiteracy.

1.2 Statement of the Problem

Internet banking has become an accepted norm of monetary transactions for millions in Nepal over the past decade. The ease with which a customer can check his account, make payments online and transfer money between accounts has made this mode of banking hugely popular among the Nepalese who are perpetually have busy schedule and are short of time to visit banks. Online banking also provides a host of nontransactional features which are quite handy to the customer. However along with the world of conveniences this method of banking has a few inherent pitfalls which need to be understood in order to protect your money and avoid complications subsequently.

However, Internet technology is rapidly changing the way personal financial services are being designed and delivered. Now, banks in Nepal are trying to introduce Internet-based e-banking systems to improve their operations and to reduce costs. Despite all their efforts aimed at developing better and easier Internet banking systems, these systems remained largely unnoticed by the customers, and certainly were seriously underused in spite of their availability. Therefore, there is a need to understand users' acceptance of Internet banking, and a need to identify the factors that can affect their intention to use Internet banking. This issue is important because the answer holds the clue that will help the banking industry to formulate their marketing strategies to promote new forms of Internet banking systems in the future.

Customers frequently do not trust Internet technology for three reasons: security of the system, distrust of service providers, and worries about the reliability of Internet services (Lee and Turban, 2001; Ratnasingham, 1998). Most customers are not satisfied with the infrastructure of Web security systems (Black et al., 2001; Gattiker et al., 2000). In Internet banking, security is one of the most important future challenges, because customers fear higher risk in using the Web for financial transactions (Aladwani, 2001; Black et al., 2001; Gerrard and Cunningham, 2003; Sathye, 1999). Customers are also worried that technology-based service delivery systems will not work as expected, and lack confidence that problems can be solved quickly (Walker et al., 2002).

An inhibiting factor is concern whether there is demand for such services, based on concerns about levels of computer ownership, Internet usage and consumer acceptance. Although the number of users of the Internet has increased significantly over the past decade, only a small fraction of those users have made actual purchases over the internet. The failure of the internet as a retail distribution channel has been attributed to the lack of trust consumers have in the electronic channel and in the Web merchants.

The motivation for this study arose out of the rapid development of Internet banking in Nepal. Since 2002, after the launch of the first Internet based banking service, the number of Internet bankers has grown at an enormous pace. Many studies in topics like factors affecting internet banking uses, Customer's perception towards Internet banking, adoption of internet banking etc. are done in many countries including Nepal. In Nepalese context, various studies, academic works regarding Internet banking, factors affecting uses of internet banking etc. had done in previous days and many other researches had been done by many authors.

Though many researches had been done, there is insufficient study in Nepal in this regards. Thus, because of lack of studies related to Internet Banking, its adoption, causes of non-adoption in Nepal, wide areas to be left unexplored.

Hence this study tries to focus on the following:

- 1. Are people aware of internet banking facilities provided by Banks in Nepal?
- 2. What are the factors affecting internet banking adoption in Nepal?
- 3. Are customers using Internet Banking in Nepal satisfied?

1.3 Objectives of the Study

The main objective of this research is to analyse customer adoption of Internet banking in Nepal. To comply with the primary objectives, the following specific objectives are set:

1. To assess the awareness of internet banking among the Nepalese people.

2. To identify the various factors affecting internet banking adoption in Nepal.

3. To examine the customer satisfaction regarding internet banking in Nepal.

1.4 Significance of the Study

This study contributes to the body of knowledge in several ways.

First, results from this research will provide information about the customers' awareness about the internet banking in Nepal. From this information BFI's can make their marketing plan regarding Internet banking facilities they are giving to reach their untapped market.

Second, the study helps to understand the advantages and disadvantages of using Internet banking so that customers can use Internet Banking facilities provided by Banks cautiously.

Third, but not the least, the results from this study will show the factors affecting adoption of using and not using Internet Banking in Nepal by which bankers can develop strategies to improve their shortcomings in their Internet Banking service and can transform non users to users.

In broad terms, the present study aims, as the title "Customer adoption of Internet Banking in Nepal" indicates, to explore the world of electronic banking through the eyes of the consumer, and by doing so seeks to increase the understanding of consumer attitude formation and behavior. The identification of personal characteristics related to the adoption of internet banking is critical for market targeting and can help banks in product design and in formulating campaigns that will encourage the adoption of the service. In this study, these are related to adoption intention, which is defined as an individual decision to try Internet banking service within a specified period of time.

1.5 Limitation of the Study

Some of the limitations of this study are as follows:

- 1. The research was conducted in limited time and other limited resources.
- 2. Limited Independent variables are taken in this study.
- 3. Result may not be accurate because this study depends wholly on respondents responses on questionnaire.
- 4. Generalization of result is difficult because of small sample size.
- 5. Result may not represent whole Nepalese people because respondents are taken only from Kathmandu valley.

1.6 Chapter Plan

This research has been organized into five chapters as follows:

Chapter I Introduction

This chapter deals with the general background of the study, statement of the problem, objective of the study, significance of the study, limitation of the study and chapter plan.

Chapter II Literature Review

This chapter includes review of articles related to the study, reviews of various related books, journals, research papers, reports, and other relevant materials related to this topic.

Chapter III Research Methodology

This chapter includes research design, population and sample, sources of data, data collection and processing procedures and statistical tools.

Chapter IV Results

This chapter consists of data presentation and analysis with the help of different tools and techniques.

Chapter V Conclusions

This chapter deals with the summary, conclusion and recommendation for the further study.

CHAPTER II

LITERATURE REVIEW

In this chapter the review of various books, research works and articles have been reviewed to make clear concept about the topic as well as to recall the previous studies made by the various researcher in the field of Internet banking. Internet banking adoption has lots of arguments and counter arguments in literature among the scholars and researcher.

This chapter is divided into two sections where one section covered definition of key concept, review of factors affecting adoption of Internet banking and clarification of theories related to the technology adoption called theoretical literature review while the other section covered the idea of other researcher presented in their research report, journal and books related to this study called empirical literature review. Similarly, there is theoretical framework part which specifically tries to find out the dependent and independent variables and seek to establish the framework for those variables based on theories.

2.1 Conceptual Review

2.1.1 Concept of Internet Banking

Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments and certificates of deposits (Haque et al., 2009). Internet banking is a result of explored possibility to use internet application in one of the various domains of commerce. The internet has grown at a remarkable pace since the emergence of the World-Wide Web in the early 1990s. While electronic commerce (e-commerce) has become an important issue with the growth of the internet, there has been insufficient empirical research concerning its adoption by Internet users (Lee et al., 2001).

Internet banking is defined as the provision of retail and small value banking products and services through electronic channels. Such products and services include deposittaking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money (Basel, 1998).

Internet has become the means for conducting growing numbers of transactions between suppliers and large international corporations because of the speed, flexibility, and efficiency that it offers. It contributes in increasing the efficiency of the banking operation as well providing more convenience to customers. Internet banking provides a speedier, faster and reliable services to the customers for which they are relatively happy. Cost of Internet banking form a fraction of costs through conventional methods (Nandhini, 2016).

There are many advantages of online banking. It is convenient, it isn't bound by operational timings, there are no geographical barriers and the services can be offered at a minuscule cost. Electronic banking has experienced explosive growth and has transformed traditional practices in banking (Gonzalez et al., 2008).

2.1.2 Factors affecting Adoption of Internet Banking

The technology acceptance model (TAM) is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. The factors influencing their decision according to Technology Acceptance Model of Fred D. Davis (1989) are; Perceived Usefulness and Perceived Ease of use. Similarly, the TAM has been continuously studied and expanded the two major upgrades being the TAM 2 (Venkatesh, 2000) and the Unified Theory of Acceptance and Use of Technology or UTAUT. A TAM 3 has also been proposed in the context of e-commerce with an inclusion of the effects of trust and perceived risk on system use (Venkatesh&Bala, 2008).

Reviewing the factors affecting Adoption of Technology of TAM of Fred D. Davis (1989), TAM 2 (Venkatesh, 2000) and the unified Theory of Acceptance and Use of Technology or UTAUT and TAM 3 (Venkatesh&Bala, 2008), the researcher has viewed the literatures of following Internet banking influencing factors:

Perceived Usefulness (PU)

Perceived usefulness is one of the components of Technology Acceptance Model (TAM), which has been widely used by information system researchers. Perceived usefulness (PU) was defined by Fred Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance". PU simply means the extent to which an individual believes that using an information system will enhance their productivity. Perceived usefulness is one of the most important factor that affects the technology acceptance decision. According to TAM, perceived usefulness is also influenced by perceived ease of use because, other things being constant, the easier the system is to use the more useful it can be. The ultimate reason people exploit online banking systems is that they find the system to be useful in their banking transactions.

The importance of perceived usefulness has been widely recognized in the field of electronic banking (Safeena et al., 2011). According to them usefulness is the subjective probability that using the technology would improve the way a user could complete a given task. Particular system would enhance his or her job performance. According to Davis et al. (1992), perceived usefulness refers to consumers' perceptions regarding the outcome of the experience. Similarly, Mathwick et al. (2002) defined perceived usefulness as the extent to which a person deems a particular system to boost his or her job performance. Jahangir & Begum, (2008); Lee et al. (2001) etc. found perceived usefulness as positive factor influencing perception towards using Internet banking.

Perceived Ease of Use (PEOU)

Perceived ease-of-use (PEOU) was also defined by Fred Davis in 1989 as "the degree to which a person believes that using a particular system would be free from effort". Extensive research over the past decade provides evidence of the significant effect of PEOU on usage intention, either directly or indirectly through its effect on PU (Davis, 1989; Wang et al., 2003; Pikkarainen et al., 2004).

Online banking systems need to be both easy to learn and easy to use so that individuals will feel less threatened (Wang et al., 2003). PEOU is also a very important factor affecting the technology acceptance decision. This implies that PEOU is expected to have a positive influence on users' interaction with the online banking (Malhotra et al., 2014). Researchers argued that perceived ease of use is the extent to which a person accepts as true that using an exacting method would be at no cost to that individual (Davis et al., 1989).

According to Mathieson (1991), the perceived ease of use is the consumer's perception that banking on the internet will involve a minimum of effort. Similarly, Consult (2002) noted that perceived ease of use refers to the ability of consumers to experiment with a new innovation and evaluate its benefits easily. He also affirmed that the drivers of growth in electronic banking are determined by the perceived ease of use which is a combination of convenience provided to those with easy internet access, the availability of secure, high standard electronic banking functionality, and the necessity of banking services.

Venkatesh (2000) presents and tests an anchoring and adjustment-based theoretical model of the determinants of system-specific perceived ease of use. The model proposes control (internal and external-conceptualized as computer self-efficacy and facilitating conditions, respectively), intrinsic motivation (conceptualized as computer playfulness) and emotion (conceptualized as computer anxiety) as anchors that determine early perceptions about the ease of use of a new system. The proposed model was tested in three different organizations among 246 employees using three measurements taken over a three-month period. The proposed model was strongly supported at all points of measurement, and explained up to 60% of the variance in system-specific perceived ease of use, which is twice as much as our current understanding. Hence, through the research report of Venkatesh (2000), the determinants of perceived ease of use are integrating control, intrinsic motivation and emotion into the Technology Acceptance Model.

Perceived Risk (PR)

The distant and impersonal nature of online environment and the implicit uncertainty of using a global open infrastructure for transactions have rendered risk an inevitable element of e-commerce. The main components of PR are perceived security and trust, which have emerged as the top issues inhibiting IB adoption.

The factor Perceived Risk reflects an individuals subjective belief about the possible negative consequences of some type of planned action, due to inherent uncertainty which is likely to negatively influence usage intentions. Trust is at the heart of all kinds of relationships. Recent research indicates that trust has a critical influence on users' willingness to engage in online exchanges of money and sensitive personal information. Trust refers to an expectation that others will not behave opportunistically.

Since Bauer (1960) first proposed that consumer behavior be seen as risk taking, valuable empirical researches have attempted to identify various types of perceived risk in the context of consumers purchase behavior. Consumers perceived trust in online payment system is defined as consumers belief that e-payment transactions will be processed in accordance with their expectations (Safeena et al., 2011). 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; 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 (Pikkarainen et al., 2004).

Perceived risk is defined in terms of the individuals perception of: the security of the system; the service providers reputation; loss of privacy; and concerns about risks associated with the reliability of IB. Trust can be defined as a users confident belief in a banks honesty toward the user. Consumers trust in their online transactions is important and has been identified as a key to the development to the system. Customers trust is a function of degree of risk involved in the situation where there is a physical separation between the bank and the customer, circumstances are difficult to predict, and the relationships are difficult to monitor.

There are still customers who fear to make use of IB, as they are concerned with security aspects of such a system. Previous research has found the risk associated with possible losses from the online banking transaction is greater than in traditional environments. Many studies showed PR as an important factor that influences online banking adoption, which is negatively related.

2.1.3 Review of Internet Banking Adoption Theories

A number of theories and models have been developed to explain user adoption of new technologies and these models introduce factors that can affect the user acceptance. These theories have been applied in a wide variety of domains to understand and to predict users' behavior. Many studies have used these models to conduct their researches to carry out their study.

Theoretical approach is necessary for complete understanding of the issues involved, and for clarity, approaches are treated independently. However, various theoretical complete understandings of involved issues require approaches. Therefore, an overview on available general adoption model is necessary in this field. The adoption theories and models are presented to give an overview for better understanding of these models and theories.

This section addresses the current theories and models that can be used to explain customers adoption of Internet banking which are discussed below:

a. Theory of Reasonable Action (TRA)

The Theory of Reasonable Action (Fishbein and Ajzen, 1975) is one of the most popular theories used and is about one factor that determines behavioral intention of the person's attitudes toward that behavior. Fishbein and Ajzen (1975) defined "attitude" as the individual's evaluation of an object and defined "belief" as a link between an object and some attribute, and defined "behavior" as a result or intention. Attitudes are affective and based upon a set of beliefs about the object of behavior. A second factor is the person's subjective norms of what they perceive their immediate community's attitude to certain behavior.

Although TRA model is firstly developed in 1975 by Fishbein and Ajzen's for sociological and psychological researches, it is recently became foundation to investigate individuals' IT usage behaviour. In this model, any human behaviour is predicted and explained through three main cognitive components including attitudes (unfavourableness or favourableness of person's feeling for a behaviour), social norms (social influence), and intentions (individual's decision do or don't do a

behaviour). This human behaviour should be volitional, systematic and rational. Moreover, three boundaries factors, volitional control; intention stability over time; and measurement of intention in terms of target, time, context, action and specificity, are defined to test and evaluate the TRA.

Furthermore, some methods such as generality, target, action, context, and time horizon are established to improve the robustness between corresponding intention and attitude. On the other hand, the main disadvantages of TRA are the lack of addressing the role of habit, the cognitive deliberation, misunderstanding through a survey (attitudes, subjective norms, and intention of the respondents) and the moral factors. In addition, usage voluntariness is a crucial issue for validation of TRA.

Theory of Reasoned Action (TRA) has its roots in social psychology setting. The theory has three general constructs, namely "behavioural intention (BI), attitude (A), and subjective norm (SN)". According to TRA behavioural intention of a person depends on his attitude and subjective norms. Mathematically, it can be interpreted that behavioural intention is the summation of attitude and subjective norms. Moreover, intention of a person likely to convert to action if there is the intention to behave in a specific manner is strong enough. TRA links the perception, norms and attitudes to the intentions of a person in making a decision, and from there predicts the behaviour which may result as a consequence of this intention. It has been criticized, however, because it does not consider the individual's ability to control (Yusuf &Derus, 2013).

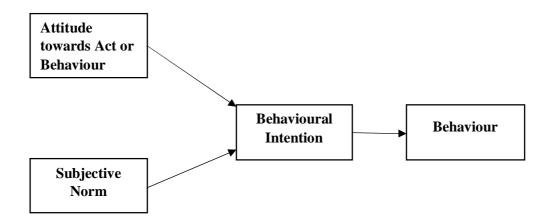


Figure 2.1: Theory of Reasoned Action, (Fishbein and Ajzen, 1975)

b. Theory of Planned Behavior (TPB)

The theory of planned behavior is an extension of the theory of reasoned action (Fishbein &Ajzen, 1975) made necessary by the original model's limitations in dealing with behaviors over which people have incomplete volitional control (Ajzen, 1991). The theory of Planned Behavior (TPB) predicts an individual's intention to engage in a behavior at a specific time and place. It posits that individual behavior is driven by behavior intentions, where behavior intentions are a function of three determinants: an individual's attitude toward behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). According to TPB, an individual's behavior can be explained by his or her behavioral intention, which is jointly influenced by attitude, subjective norms and perceived behavioral control.

Behavioral intention is a proxy measure for behavior. As in the original theory of reasoned action, a central factor in the theory of planned behavior is the individual's intention to perform a given behavior. Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior (Ajzen, 1991). It represents a person's motivation in the sense of her or his conscious plan or decision to perform certain behavior (Conner & Armitage, 1998). Generally, the strong the intention is, the more likely the behavior will be performed. Attitude towards behavior refers to the degree to which a person has positive or negative feelings of the behavior of interest. It entails a consideration of the outcomes of performing the behavior.

Subjective Norm refers to the belief about whether significant others think he or she will perform the behavior. It relates to a person's perception of the social environment surrounding the behavior. TPB adds the concept of Perceived Behavioral Control (PBC) to the constructs attitudes and subjective norms which make the TRA. Perceived Behavioral Control refers to the individual's perception of the extent to which performance of the behavior is easy or difficult (Ajzen, 1991). It increases when individuals perceive they have more resources and confidence (Hartwick & Barki, 1994).

Basically, PBC is determined by the availability of resources, opportunities and skills, as well as the perceived significance of those resources, opportunities and skills to achieve outcomes. Although both TPB and TRA assumed person's behavioral intention (BI) is affecting individual's behavior, TPB is using the PBC for individual's actions which are not under volitional control. By adding PBC, not only realistic limitations is composed but also, a self-efficacy type factor is achieved. Moreover, PBC has the direct influence on actual behavior as well as the indirect affect through the behavioral intentions.

This theory examined the factors of attitude, subjective norms, perceived behavioral control, and intentions on the actual behavior. This theory focused on mandatory situations, whereas TRA focused only on voluntary situations (Sharma &Chandel, 2013). Ajzen conceptualized that PBC is a function of skills, resources, and opportunities to achieve the outcome, which are closely related to the efficacy belief. The PBC is defined as the perception of internal and external limitations on behaviors (Sharma &Chandel, 2013).

PBC differs from Rotter's (1966) concept of perceived locus of control because it is not constant and varies with different situations faced by the individual. Locus of control is considered to be a more generalized expectancy of the individual that remains fairly stable across situations. In this way, the criticism faced by TRA that it is based on relatively static construct of attitude and thus cannot be used for prediction of behavioral outcome has been addressed by TPB. The roots of concept of PBC are grounded in the Self-Efficacy Theory (SET) proposed by Bandura (1977) which in turn came from the Social Cognitive Theory. Bandura (1986) defined self-efficacy as "the judgments of how well one can execute courses of action required to deal with prospective situations". According to the theory, self-efficacy is the most important determinant for behavioral change since it leads to building up of coping behavior. Therefore in TPB model, three main factors are affecting BI including perceived behavioral control, subjective norm, and behavioral attitude. However, there are two main problems with TPB model. First, the one's attitudes towards information technology will not be largely relevant if a computer system is not accessible. Second, the revised TPB may be viewed as the more suitable theoretical framework which is influenced the degree of individual's voluntariness that choose or not to choose the use of information technology in the workplace. Researchers have concluded that the TPB has a greater ability to predict behavior than the TRA (Liang & Huang, 1998).

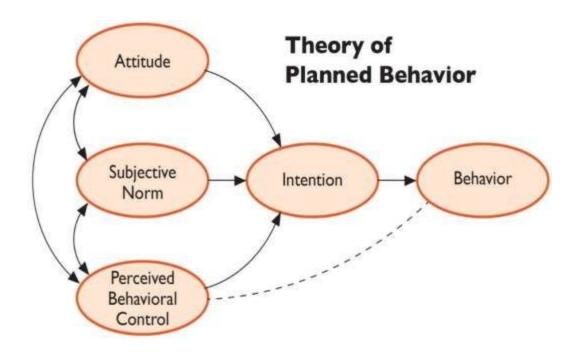


Figure 2.2: Theory of Planned Behavior (Ajzen, 1991)

c. Theory of Interpersonal Behavior (TIB)

This model is clarifying mainly the human's behavior complexity which are effected by social and emotional factors. Therefore, this model not only contains all aspect of TRA and TPB but also, adding habits, facilitating conditions and affect in order to improve the prediction power. The concept of social factors which is similar to the subjective norms construct in TRA contain roles, norms and self-concept. In brief, in TIB, individual is neither fully deliberative nor fully automatic, further, neither fully autonomous nor entirely social. TRA differs from TIB, in the sense that TRA interests in accounting for the most variance with the fewest variables, whereas TIB interests in accounting for the most variance in total, because even a small amount of variance may be socially important, if the behavior in question is critical.

In this model, emotions, social factors (like subjective norms in TRA), and habits are identified as the main factors to form the intention. TIB has three levels to argue the behavior. In the first level, personal beliefs, attitudes and social factors related to the behavior is shaped by personal characteristics and previous experiences. The second level describes how affect, cognition and social determinants plus personal normative beliefs effect on intentions to a particular behavior. In the third level, possibility of performing a specific behavior is predicted by behavioral intentions, situational conditions and past experience. The main disadvantage of TIB is complexity and lack of parsimony compared to TRA and TPB. Also, TIB isn't providing simple procedure for the operational definition of the variables among model and it is left to the researcher.

d. Technology Acceptance Model (TAM)

In 1970, technology needs was growing in the worlds economy and on the other hand, increasing failures of system adoption in organizations, predicting system use became an area of interest for many researchers. However, most of the studies carried out failed to produce reliable measures that could explain system acceptance or rejection (Davis, 1989). In 1985, Fred Davis proposed the Technology Acceptance Model (TAM) in his doctoral Thesis at the MIT Sloan School of Management (Davis, 1985). TAM has proven to be a theoretical model in helping to explain and predict user behavior of information technology (Legris et al., 2003).

It is a model of user acceptance of information systems technology based on the theory of reasoned action. It is derivate from TRA model. The TAM was initially proposed by Davis (1989). It comprises two beliefs, the perceived utilities and the perceived ease of application, which determine attitudes to adopt new technologies. The attitude toward adoption will decide about the adopters positive or negative behavior in the future concerning new technology. TAM is considered an influential extension of theory of reasoned action (TRA), according to Fishbein and Ajzen (1975). Davis (1989) and Davis et al. (1989) proposed TAM to explain why a user accepts or rejects information technology by adapting TRA.

TAM provides a basis with which one traces how external variables influence belief, attitude, and intention to use. Two cognitive beliefs are posited by TAM: perceived usefulness (PU) and perceived ease of use (PEOU) for predicting extent of adoption of new technologies at individual level. Perceived usefulness is defined as the potential user's subjective likelihood that the use of a certain system will improve his/her action and Perceived ease of use refers to the degree to which the potential user expects the target system to be effortless (Davis, 1989). Shroff et al. (2011) reported that by manipulating these two determinants, system developers can have better control over users' beliefs about the system and so can predict their behavioral intention and actual usage of the system. Attitude towards using a new system has been classified as a determinant that guides future behavior or as a cause of intention which eventually leads to certain behavior. So, the TAM has used the TRA as a theoretical basis to find the links between these two factors as well as the user's attitude, intention and actual technology behavior.

In contrast with TRA, the TAM does not include subjective norms because of the weak psychometric results which are generated (Davis et al., 1989). Researchers of Information and Communication Technologies (ICT) have criticized this model for not including subjective norms, however, as this is considered to be a crucial factor, despite that the inclusion of subjective norms in TRA is known to have theoretical and psychometric issues. The social influence does not seem to have a direct relationship with behavior intention although it has a relationship with attitude.

TAM was originally tested in the context of adoption of email service and file editor at IBM Canada with 14 items on each of 2 constructs. The results of the survey on sample of 112 users validated the model with the finding that perceived usefulness is a stronger factor than perceived ease of use that drives technology adoption. In next ten years, TAM became well-established as a robust, powerful, and parsimonious model for predicting user acceptance. King and He (2006) presented a meta analysis of TAM and found that it is a valid and robust model with applications in a wide range of areas. Dwivedi et al. (2011) carried out a comparison of TAM and UTAUT and found that focus is now shifting away from TAM to UTAUT while citing in the research articles. In another study, Benbasat&Barki (2007) have criticized TAM especially on the grounds of its limitations in the fast-changing IT environment. Some researchers argue that the TAM does not consider any barriers that would prevent the individual from adopting a particular technology. Bagozzi has pointed out that the TAM is too simple and leaves out important variables (Bagozzi, 2007). However, it has also been recognized by others as a powerful, valid and highly reliable predictive model that can be used in several contexts (Legris et al., 2003; Sharma &Chandel, 2013). Moreover, it constitutes an important theoretical contribution towards understanding ICT usage and acceptance behaviors. Therefore, with regard to the ICT field, researchers have used the TAM to study the adoption of different technologies and it has become the most significant theory in this field.

According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system. TAM also proposes that external factors affect intention and actual use through mediated effects on perceived usefulness and perceived ease of use. The belief of the person towards a system may be influenced by external variables in TAM. External variables need to be added to TAM to provide more consistent prediction of system use. Figure 2.3 depicts the original TAM (Davis, 1989).

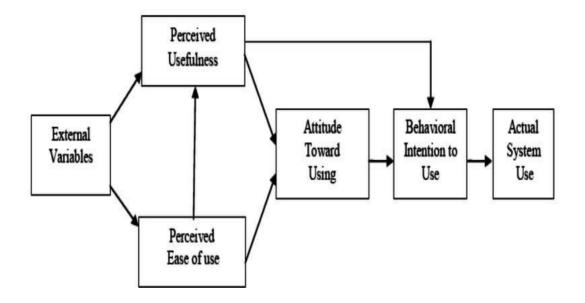


Figure 2.3: Original Technology Acceptance Model (Davis, 1989)

e. Innovation Diffusion Theory (IDT)

Research in diffusion can be traced back to the epic work by Everett Roger's in 1960 named as the Diffusion of Innovation Theory which has been widely applied by the researchers over the years. Rogers proposed that the theory of 'diffusion of innovation' was to establish the foundation for conducting research on innovation acceptance and adoption. Rogers synthesized research from over 508 diffusion studies and came out with the 'diffusion of innovation' theory for the adoption of innovations among individuals and organization. Innovation is an idea, process, object, or practice that can be considered to be new, and diffusion is the process by which it gets into the social system (Rogers, 1995). This theory is considered to be the permanent theory of acceptance of innovation and is appropriate in both an individual or organizational context.

The main idea of the theory is that there are four elements that influence the spread of a new idea: the innovation, communication channels, time and social system. IDT not only has been used at both organizational and individual levels but also, offers a theoretical foundation to discuss adoption at a global level. The process of diffusion consists of five stages, namely, knowledge, persuasion, decision, implementation, and confirmation. It results in six categories of users: innovators, early adopters, early majority, late majority, laggards and the leap-froggers.

The diffusion innovation theory provided the concept of S-shaped curve of adoption which was also called as the epidemic model of adoption. The reasoning for such Sshaped curve is that initially the innovation has to come from outside the boundaries of the social system prevalent at that time. This implies that number of people that are exposed to the innovation are few in the beginning. As these people in the social system start accepting the innovation, they bring it in contact with more and more people. Therefore, the rate of spread keeps on increasing. Eventually, the innovation is accepted by most of the members of social system and the rate of spread declines. As there are no more members left for accepting the innovation, the spread stops completely. In conclusion, IDT more focus on the system characteristics, organizational attributes and environmental aspects, it has less power in explanatory and less practical for prediction of outcomes compared to other adoption models.

f. Social Cognitive Theory (SCT)

The social cognitive theory (SCT) was developed by Albert Bandura in 1986. It theorises that learning occurs in a social context with a dynamic and reciprocal interaction of the personal factors, environmental factors, and behaviors (Bandura, 1986). It posits that users acquire and maintain behavior while considering the social environment in which they develop the behavior. Social cognitive theory extends the TAM model by trying to include a more comprehensive understanding of behavioral intentions to adopt a new technological innovation. SCT, used in psychology, education, and communication, holds that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences. Social cognitive theory was proposed by Bandura (1986) to understand the interaction in the environment an individual has with their behavior.

Social cognitive theory is dynamic, thus, this dynamic ability to adapt to change is particularly important in the rapidly evolving global technology industry in which new innovations take place. In 1986, Bandura advanced a view of human functioning that accords a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaption and change in his theory, Social Cognitive Theory. People are viewed as self-organizing, proactive, self-reflecting and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses. Social Cognitive Theory of human development (Bandura, 1986) is about human capabilities vary in their psychobiologic origins and in the experiences needed to develop and maintain those capabilities.

Inspired from social psychology, SCT was proposed based on three main factors; behavior, personal, and environment which are interacted bi-directionally in order to predict both group and individual behavior. Moreover, it can identify methods which can change and modify behavior. In SCT model, behavior factor is chiefly focused on usage, performance and adoption issues. However, personal factor is any personality, cognitive and demographic aspects characterizing a person. On the other hand, environmental factor includes physical and social factors which both are physically external to the individual. SCT is an inseparable triadic structure that all three factors constantly influence one another, reciprocally determining each other. SCT model is

integrated to evaluate the information technology usage by using some constructs including self-efficacy, outcome expectations performance, anxiety, affect, and outcome expectations personal.

Focus of the Social Cognitive Theory (SCT) is on the concept of self-efficacy which is defined as "the judgment of one's ability to use a technology to accomplish a particular job or task" (Compeau and Higgins, 1995). According to SCT, behavior of the user is influenced by expectations of outcome related to personal as well as performance-related gains. Self-efficacy, in turn, influences the expectation of outcome of both types. While esteem of the person and his sense of achievement relate to personal outcome expectations, outcome expectations related to performance on the job lead to performance related expectations.

According to SCT, there are two opposing factors that influence behavior of the users. Positive contribution is made by the factor "affect" which is the extent to which an individual likes his job. On the other hand, negative contribution to desired behavior is made by the factor "anxiety" which is the anxious reaction of the person while performing a job such as trying to use a computer with which the person is not very familiar. This theory has been widely used in adoption studies.

g. Motivational Model (MM)

Davis applied the motivational theory to study information technology adoption and use. The main premise of the Motivation Model is that there are extrinsic and intrinsic motivations that shape the behavior of the user. It posits that the individual's behavior is based on intrinsic and extrinsic motivation. Extrinsic motivation is defined as the perception that users 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). On the other hand, if performing an activity leads to a feeling of pleasure and results in satisfaction for the individual, such behavior can be classified as intrinsic motivation. Users want to perform an activity "for no apparent reinforcement other than the process of performing the activity per se" (Davis et al., 1992).

Intrinsic motivation arises from a person's inner drive to perform the task and relates to perceptions of pleasure and satisfaction (Davis et al., 1992). On the other hand, extrinsic motivation arises when the cause of motivation is outside the person or outside the task (Cheng &Yeh, 2009). In this model, computer playfulness and enjoyment are determinants of intrinsic motivation (Davis et al., 1992; Venkatesh, 2000) and perceived usefulness, perceived ease of use, and subjective norm are determinants of extrinsic motivation. This model is based on the psychological aspects of technology acceptance.

Davis proposed that perceived usefulness as an extrinsic motivation and perceived enjoyment as an intrinsic motivation. Generally, the output quality and perceived ease of use have impact on perceived enjoyment and perceived usefulness. Moreover, they introduced task importance as a moderator of the ease of use and output quality influences on usefulness. Therefore, the output quality and perceived ease of use influence BI indirectly through perceived usefulness and perceived enjoyment.

h. Igbaria's Model (IM)

According to IM, both extrinsic and intrinsic motivators effect on the new technology acceptance or rejection. This model posited perceived fun as intrinsic motivator and perceived usefulness as extrinsic motivator which influence on behavior (computer usage) and attitude (computer satisfaction). Apart from these factors, user acceptance (actual behavior) is directly and indirectly affected by perceived usefulness, computer anxiety, computer satisfaction, and perceived fun.

Also, perceived fun and perceived usefulness have both direct and indirect (via satisfaction) influence on adoption. Besides, perceived usefulness effects on perceived fun. Additionally, computer anxiety negatively affects two factors, perceived fun and perceived usefulness. Also, it has been confirmed that satisfaction of computer has a direct influence on usage.

2.2 Review of Research Articles

Several empirical studies around the world have been conducted to study the adoption of Internet banking and factors affecting adoption of Internet banking.

Singhal & Padhmanabhan (2008) studied Customer Perception towards Internet Banking: Identifying Major Contributing Factors. The study aims to explore the major factors responsible for internet banking based on respondents' perception on various internet applications. Study also tries to examine whether there is any relation with the demographic variable and respondents' perception about internet banking; and, whether the user and non-user perception differs. The researcher found that utility request, security, utility transaction, ticket booking and fund transfer are major factors contributing perception toward Internet Banking. Similarly, another result found was out of total respondents' more than 50% agreed that internet banking is convenient and flexible ways of banking and it also have various transaction related benefits.

AlKailani (2016) investigates how customers perceive and adopt internet banking (IB) in Jordan. An extended model, based on the Technology Acceptance Model (TAM), was developed. Three more constructs were added to the model, namely; Perceived Risk (PR), Perceived Trust (PT) and Bank Credibility (BC) in the research. To empirically test the model's ability to predict customers' intention to adopt and use internet banking, a questionnaire was developed and used. A randomly 500 graduate students at four Jordanian Universities were surveyed. An exploratory factor analysis, correlation matrix, and a regression analysis were used to test the robustness of the model as well as to test the hypothesized relationships among variables. The results provides support to the extended TAM model and confirm its robustness in predicting customers' intention to adopt and use internet banking.

Malhotra et al. (2014) studied factors affecting adoption of Internet Banking in India. The study was based upon a survey of 150 bank customers using a convenience sampling technique with the aid of a structured self-administered questionnaire. The research model was analyzed using Partial Least Squares (PLS) analysis. Perceived Usefulness, Perceived Ease of Use, Perceived Risk, Perceived Behavioral Control and Subjective Norm were influence intention to use Internet banking. According to the findings of the study, Perceived Ease of Use, Perceived Credibility and Computer Self-efficacy were not influence intention to use Internet banking. The findings of this study are expected to be of great use to the bank marketers. An understanding of the factors identified in this study allows bank managers to direct efforts and resources in the most effective and efficient way to increase bank business in the long run and encourage their bank customer's to adopt Internet banking.

Eze et al. (2011) investigated the factors that influence the use of Internet banking services among young Malaysian adults. It is becoming critical for bank managers to understand their customers in order to deliver services effectively. This group of users happens to be the most targeted, and understanding them is essential. The conceptual framework is based on extended Technology Acceptance Model with six independent variables. They selected a sample of 310 participants using convenience sampling method. Data analysis was then based on 229 valid responses. Results indicate that perceived ease of use, perceived usefulness, relative advantage, self-efficacy, perceived credibility and trial ability tend to influence consumers to adopt Internet banking. The findings would be useful for literature development in the subject area, particularly in Malaysia. The findings would also be useful to theoretical development in Internet banking.

Amin (2009) investigates the factors influencing the online banking acceptance in Kota Kinabalu, Northern Borneo, Malaysia. The study uses technology acceptance model (TAM) as the base model in order to investigate the online banking acceptance. In this paper, a linear regression is done to examine the factors influencing online banking acceptance. The model used in paper employs perceived credibility, perceived enjoyment, and social norm, in addition to perceived usefulness and perceived ease of use. The outcome of the study suggests that perceived usefulness, perceived ease of use, perceived credibility and social norm are statistically significant while perceived enjoyment are statistically insignificant. This study offers an insight into online banking in Kota Kinabalu, Northern Borneo, Malaysia, which has been limitedly investigated previously. Indeed, the result is useful to banks planning to further enhance online banking usefulness.

Jahangir and Begum (2008) proposed a conceptual framework that will investigate the effects of perceived usefulness, perceived ease of use, and security and privacy on customer adaptation mediated through customer attitude in the context of e-banking.

To test the framework, structural equation modeling techniques have been applied to data collected from 227 customers of private commercial banks in Bangladesh. Primarily this study aims to test the theoretical models to measure the causality whether perceived usefulness, ease of use, security and privacy, and customer attitude can foster customer adaptation. The initial results of the study indicate that perceived usefulness, ease of use, security and customer attitude are significantly and positively related to customer adaptation. Implications for practicing managers and for future research are discussed.

Zarai and Nasri (2014) studied about the adoption of Internet Banking in Tunisia. The impact of perceived usefulness, perceived ease of use, awareness, social norm, security and privacy, and computer self-efficacy on intention to use Internet banking was tested through structural equation modeling techniques. The 284 self-administrated questionnaires were collected from Tunisian's customers who were using banking services in Tunisia. The findings of the study suggest that customer' intention to use Internet banking can be affected by perceived usefulness can be affected by both perceived ease of use and influence social. Customers' perceived ease of use can be determined by security and privacy and customers' self-efficacy, and social influence.

Amin (1970) did research on the technology acceptance of internet banking among undergraduate students in Malaysia whose theoretical framework based on modified version of Technology Acceptance Model (TAM). This paper develops a technology acceptance model for internet banking, a conceptual framework to explain the factors influencing undergraduate students' acceptance of internet banking. The model used in paper employs perceived usefulness (PU), perceived ease of use (PEOU), perceived credibility (PC) and computer self-efficacy (CSE). The first two are two initial constructs for TAM model. The rest are new constructs to be included in the model in order to have an extension of TAM model that better reflects the students' view. The results suggest that PU, PEOU and PC had a significant relationship with behavioral intention. Further, these measures are good determinant for undergraduate acceptance for internet banking. Results also suggest that PU and PEOU had a significant relationship with CSE. On the contrary, CSE did not associate with PC. Also, PEOU had Internet banking adoption among Young Intellectuals.

Cheng et al. (2006) investigates how customers perceive and adopt Internet Banking (IB) in Hong Kong. A theoretical model based on the Technology Acceptance Model (TAM) with an added construct was developed in the paper. Perceived Web Security, and empirically tested its ability in predicting customers' behavioral intention of adopting IB. A questionnaire was designed and used it to survey a randomly selected sample of customers of IB from the Yellow Pages, and obtained 203 usable responses. Data were analyzed using Structured Equation Modeling (SEM) to evaluate the strength of the hypothesized relationships, if any, among the constructs, which include Perceived Ease of Use and Perceived Web Security as independent variables. Perceived Usefulness and Attitude as intervening variables, and Intention to use as the dependent variable. The results provide support of the extended TAM model and confirm its robustness in predicting customers' intention of adoption of IB.

Ainin et al. (2005) adapted model of website evaluation to study the information, legal statement, order, ease of use, aesthetics effects, performance and others elements of bank that provide internet banking. The study found that a negative relationship between age and internet banking adoption among Klang Valley adopters. Monthly gross income and job position level had positive significant relationship with internet banking adoption among Klang Valley adopters. Further there was no significant relationship between gender, marital status, ethnic group, level of education with internet banking adoption. The study also found that family, colleagues and peers were influence the most on their adoption decision. However, the study merely focused on demographic factors and there is no further analysis to identify the website elements that influence consumer in internet banking adoption.

Bhattacherjee (2001) conducted a study examining the influenced of cognitive beliefs and affect on one's intention to continue using the Internet banking. Based on the Expectation-Confirmation Model (ECM) and the TAM, Bhattacherjee hypothesized that consumers' intention to continue using the Internet banking was predicted by their satisfaction and perceived usefulness. Results of the study revealed that satisfaction with the Internet banking was the strongest predictor of users' continuance intention followed by perceived usefulness. Suh and Han (2002) investigated the effect of trust on customers' acceptance of Internet banking in Korea. The results supported the hypothesis that trust is a significant determinant of the intention to use Internet banking. The study also found that trust, perceived usefulness, and perceived ease of use were significant determinants of attitude. Attitude and perceived usefulness had a significant effect on the intention. Finally, intention had significant effect on the actual usage.

Sohail and Shanmugham (2003) investigated factors that influence Internet banking acceptance among retail users of banking services in Malaysia. They found nine major factors affecting the adoption of Internet banking services: Internet accessibility, awareness, attitude towards change, computer and Internet access costs, trust in one's bank, security concerns, ease of use, and convenience. With reference to age and education, the study found that there were no demographic differences between Internet bank users and the non-users.

Mattsson & Helmersson (2005) investigated the e-competence of Internet banking customers in Denmark. They found that these customers could be classified into two groups; those that felt abandoned by the Internet banking provider and those that were satisfied with the delivery method of the Internet banking services. The authors suggest that this has important implications as it support that notion that not all customers are comfortable with web technologies, and that banks that intend to deliver services via the internet need to make the website easy to use and to provide the necessary help functions to overcome this feeling of abandonment.

Walker and Johnson (2005) surveyed 180 urban shoppers to determine the attitudes of consumers toward Internet banking. They found that these consumers preferred Internet banking for primarily for convenience related to personal circumstance (time demands). The study also found that the consumers missed the personal aspect on traditional banking and that Internet banking should provide more personal interaction in conjunction with convenience that it offers.

Al-Smadi (2012) studied the factors affecting bank customers' use of electronic banking services. The study integrated technology acceptance model (TAM) with the theory of planned behavior model (TPB) and incorporates five cultural dimensions and perceived risk to propose a theoretical model. The primary data were collected

from 387 valid questionnaires which were distributed to random banking customers in all 26 licensed banks in Jordan. Multiple regression analysis was employed to test the hypotheses. The main findings of the study were: uncertainty avoidance has a positive and significant impact on perceived ease of use and perceived usefulness. Perceived risk has the stronger impact on customers' attitude, which in turn influences customers' intention to use electronic banking services.

Annamalah (2008) explored the factors influencing the adoption and usage of Internet banking in technological perspective. The research commonly uses applied and empirically supported models of information technology adoption to achieve the objective. In this study, technology acceptance model (TAM) is extended by two external variables, namely risk and self-efficacy. Data were collected using a survey on banking customers in a state area in Malaysia and analyzed using hypotheses testing model variables. The results reveal that perceived usefulness, perceived ease of use, and self-efficacy have a significant association with intention to use Internet banking. The results of this study also indicate that extended TAM model have low capabilities in explaining the variances in "users" intention to adopt or use Internet banking services.

Qayyum and Ali (2012) studied factors determining customers' adoption of internet banking. The purpose of the study was to identify and analyze the most important factors that can influence the adoption of internet banking by Swedish customers. The study used both qualitative and quantitative research methods. The qualitative research is conducted by collecting secondary data from full text databases of Malardalen University, whereas quantitative research is conducted using survey research method. Moreover, the study was based on the deductive approach as conclusions are drawn from theories. The researcher found out that numerous factors are important for the adoption of internet banking by customers. However, the literature and survey results indicate that web usability, security, information quality, trust, service quality, convenience and privacy are the most important factors in the adoption of internet banking.

Raida and Neji (2013) studied the technology acceptance model which has been adopted by several previous researches. The purpose of the study is to determine the factors that explain the adoption of e-banking by professional in "Business to Business" relationships. It explores the determinants of use of the Internet in the relationship between bank and firm and it validates the model in Tunisian context. This paper has tested that perceived usefulness and perceived ease determine the attitude of the use, and that attitude determines the intent to use of e-banking by means of the multiple regressions. The originality of this study is the exploration of the determinants of use of e-banking by professional in order to promote its adoption.

Gerrard and Cunningham (2003) studied internet banking as a form of self-service technology, costing millions of dollars, which leading retail banks have made available in the recent past. An understanding of why users are more accepting of Internet banking services should help bank managers implement this self-service technology. This study identifies eight characteristics which influenced the rate of adoption. Two of these characteristics, namely accessibility and confidentiality, are new to the literature. The results show that adopters of Internet banking perceive the service to be more convenient, less complex, more compatible to them and more suited to those who are PC proficient. Adopters were also found to be more financially innovative. The perceptions that adopters had about social desirability, confidentiality, accessibility and economic benefits were viewed no differently when adopters were compared with non-adopters.

Ahmed and Phin (2016) investigated on how demographic characteristics, social factors, and consumer perceptions and attitudes towards internet banking influence the adoption of internet banking in an emerging economy like Malaysia. The study focused solely on the local and multinational banking industries in Malaysia and used questionnaire to obtain the relevant data. Implementation of the questionnaire was done by using the proportional stratified random sampling method, whereby questionnaires were distributed to the target population over the period of August to September 2014. Of the 300 questionnaires distributed 120 were returned complete and clean. Overall it was shown that social factors strongly influence the adoption of internet banking in an emerging economy like Malaysia.

Lichtenstein and Williamson (2006) studied Australian banking consumer experiences with the adoption of internet banking. The paper provides an understanding of how and why specific factors affect the consumer decision whether or not to bank on the internet, in the Australian context. A theoretical framework is provided that conceptualizes and links consumer-oriented issues influencing adoption of internet banking. The paper also provides a set of recommendations for Australian banks. Specifically, the findings suggest that convenience is the main motivator for consumers to bank on the internet, while there is a range of other influential factors that may be modulated by banks. The findings also highlight increasing risk acceptance by consumers in regard to internet based services and the growing importance of offering deep levels of consumer support for such services. Finally, the paper suggests that banks will be better able to manage consumer experiences with moving to internet banking if they understand that such experiences involve a process of adjustment and learning over time, and not merely the adoption of a new technology.

Hua (2008) studied online banking as an internet based service enabling people to do financial transactions, has been an obstacle for the development of e-commerce in China. This paper investigate the online banking acceptance in China. The researcher conducted an experiment to investigate how users' perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. It was found that both perceived ease of use and privacy policy had a significant impact on users' adoption of online banking. This study investigated the relative importance of perceived ease of use, privacy and security. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing user's adoption.

Sudha et al. (2007) studied that the security is the primary factor which determines the adoption of Internet banking technology. The secondary information on Internet banking development in Malaysia shows a very slow growth rate. Hence, this study aims to study the banking customer's perception towards security concern and Internet banking adoption through the information collected from 150 sample respondents. The data analysis reveals that the customers have much concern about security and privacy issue in adoption of Internet banking, whether the customers adopted Internet banking or not. Hence, it infers that to popularize Internet banking system, there is a need for improvement in security and privacy issue among the banking customers.

Ramavhona and Mokwena (2016) studied that the banking industry globally provides Internet banking to offer their customers easy access to banking services. The banks in South Africa, like their counterparts in other parts of the world, offer Internet banking to customers. However, the majority of South Africans in rural areas does not adopt and use Internet banking despite its convenience, the availability of Internet banking infrastructure, the effort of banks in promoting Internet banking awareness and Internet security. This research investigated factors which influence the adoption and use of Internet banking in the context of South African rural areas. In this study, a quantitative research approach was used. Data were collected through questionnaires and analyzed using Statistical Package for Social Science (SPSS) tool. The perceived compatibility, trial ability and external variables such as awareness and security were found to have significant influence in the adoption of Internet banking in South African rural areas, whereas relative advantage was found not to be a significant factor. Security and the complexity of Internet banking were also revealed as some of the factors hampering the intention to adopt Internet banking in South African rural areas.

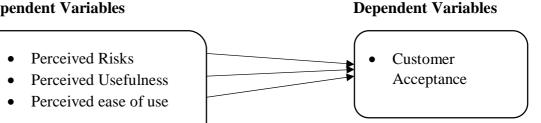
Ochuko et al. (2009) presents the major factors for Internet banking adoption and compares the levels of adoption across countries, in order to identify more easily what factors to consider most while providing banking services over the Internet. Based on prior studies, web security, Internet usage, economy status, high branch intensity, competition, government prioritization regulations, and literacy level were identified as the major factors affecting Internet banking adoption. This study uses fuzzy inference system (FIS) to define the adoption rate. Their experimental results show that security is the most important factor because no matter how high government prioritization, literacy level, Internet users, and competition among Internet service providers are, as long as there are low security levels, the adoption rate will be at the lowest level. The researcher concluded that, overall, the banks specific factors are the main drivers for Internet banking adoption.

2.3 Theoretical Framework

Technology Acceptance Model (TAM) provides a conceptual framework for this study. In the technology context of use, the frequency of use and duration of experience with the technology have been found to capture the customer's use of technology. TAM has been taken to test the adoption of Internet banking in Nepal. The model consists of two independent variables. They are: Perceived usefulness and Perceived ease of use but the researcher had added Perceived risk as an independent variable on it. Similarly, dependent variable is Customer Acceptance through Customer's use of Internet banking.

The theoretical framework for this study is given below.

Independent Variables



The variables are discussed below:

Independent Variables:

Perceived Usefulness (PU)

Perceived usefulness is one of the components of Technology Acceptance Model (TAM), which has been widely used by information system researchers. PU is the extent to which a person believes that using a particular system will enhance his or her performance. The importance of PU has been widely recognized in the field of electronic banking. It is the primary prerequisite for mass market technology acceptance, which depends on consumers' expectations about how technology can improve and simplify their lives. Empirical studies on TAM have suggested that PU has a positive effect on the adoption of Internet banking.

Perceived Ease of Use (PEOU)

Perceived ease of use is the extent to which a person believes that using a particular system will be free of effort. PEOU is a person's subjective perception of the effortlessness of a computer system. Also, the longer an individual has been using IB the more likely they are to find it easy to use. The easier it is for a user to interact with a system, the more likely he or she will find it useful. There is substantial empirical support for this view. It affects the consumers' intentions to use IB. The extensive research over the past decade provides evidence of the significant effect of PEOU on usage intention, either directly or indirectly through its effect on Perceived usefulness. PEOU is supposed to have a positive impact on users' decision in using Internet banking.

Perceived Risk (PR)

Perceived risk is mainly concerned with security aspects of Internet banking which has emerged as the top issues inhibiting IB adoption. There are still customers who fear to make use of IB, as they are concerned with security aspects of such a system. Previous research has found the risk associated with possible losses from the online banking transaction is greater than in traditional environments (Bradley & Stewart, 2003 and Wang et al., 2003). Research has shown PR as an important factor that influences online banking adoption, which is negatively related. Risk of security, privacy and many other risks are associated in using IB. Hence, Perceived risk in using IB plays vital role in adoption of Internet banking.

Dependent Variable:

Customer's Acceptance (CA)

The dependent variable in this research model is customer's acceptance of Internet banking services provided by Banks and Financial Institutions. Acceptance of IB can be influenced by many factors like convenience, reliability, transaction costs, security, user friendliness, time saving and so on. Embracing all these factors, this research model was developed by stating independent variables of Perceived ease of use, Perceived usefulness and Perceived risk. Perceived Ease of Use, Perceived Usefulness and Perceived Risk are directly proportional to customer's acceptance. When a person perceives IB as easy to use and is useful he/she will accept IB and starts using it. If he/she perceives IB as very risky, he/she refuse to use it.

Many researches has shown perceived usefulness and perceived ease of use have positive influence on acceptance of an information system or new technologies. Hence an application perceived to be useful perceived to be easier to use than another is more likely to be accepted by users. By applying these into online banking, hypotheses are drawn as:

H1: There is a significant relationship between Perceived usefulness and Customer acceptance of IB.

H2: There is a significant relationship between Perceived ease of use and Customer acceptance of IB.

H3: There is a significant relationship between Perceived risk and Customer acceptance of IB.

2.4 Research Gap

The adoption of IB has a great impact in a developing economy which cannot be ignored as it is focused as an important distribution channel. In recent years, development in information technology and the subsequent evolution of IB have fundamentally changed the ways in which banks implement their business and consumers conduct their everyday banking activities. Therefore, it is important to do comprehensive study in order to gain a deeper insight about the dynamics of IB adoption from a Nepalese perspective.

However, despite the continuing increase in the number of internet users and despite all the apparent advantages of IB for customers, the growth rate of internet users who adopt IB has not risen as strongly as expected. So, there is a growing interest in understanding the users' experience as it is observed as a larger concept than user satisfaction. From this perspective, assessing the user experience is essential for many technology product and services. Using numerous different theoretical approaches and models, several researches have investigated the factors that impact the decisions of customers to adopt IB. Because of this, researcher gets the chance to further study the factors that influence customers' intention to adopt IB, so that banks can better formulate their marketing strategies to increase IB usage in the future. This study aims to investigate the behavioral intention of customers to use IB services.

Many researchers had done various researches regarding factors responsible for customer's acceptance and adoption of IB, customer's perception and so on but research in this regards are still limited and there is still a gap, which this study wishes to fulfill. Thus, this study aims to explore the customer's perception about IB in Nepal and the major factors affecting customer's acceptance and adoption of IB in Nepal based on respondents perception inside Kathmandu valley.

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the methodology used for the study in details. The chapter has been divided into sub-section which provides a brief description about the research design, population and sample, sources of data, data collection and processing procedure. It also contains the statistical tools and model used for the study.

3.1 Research Design

This study is based on descriptive research design as well as analytical research design. Analytical research design is a specific type of research that involves critical thinking skills and the evaluation of facts and information relative to the research being conducted. It involves the in-depth study and evaluation of available information in an attempt to explain complex phenomenon.

Descriptive research is a study which is generally conducted to assess the opinions, behaviours, or characteristics of a given population and to describe the situation and events occurring at present. This research design is the best for the study as it involves gathering data that describes events and then organizes, tabulates, depicts and describes the data collections. The study undertaken is quantitative research.

3.2 Population and Sample

This study is conducted among the various Bank's customer within the Kathmandu valley. The population for the study included entire Bank's customer who have at least one Bank account. Location choice is purely based on the convenience and the limitation imposed by the scope and timeframe of the study. The accessible population was all employees, student, housewife and self-employed who could be easily included in the sample on the day of determining the final study.

The total sample size taken for the study was 120 respondents. The sample represents the whole population of the study. The sample includes bank customers of different banks of Kathmandu valley. Convenience sampling was used in this study. Convenience sampling is one of the main type of non-probability sampling methods. Due to the time and financial constraints, this method was the most useful method because it is the best way to reach to the respondents.

3.3 Nature and Sources of Data

It is universal that any research study must require some kind of data either primary or secondary or both. The data used for conducting the research were collected from the primary sources.

3.3.1 Primary Data

The research methodology adopted was basically based on primary data via which the recent and accurate piece of firsthand information could be collected. Primary data was collected through a self-administered questionnaire. Relevant questionnaires were prepared and distributed among the respondents. The respondents were customers of different banks of Kathmandu valley.

3.4 Data collection procedure

Regardless of the research design, it is very important to collect accurate data to achieve useful result in any research (Pant, 2009). This research was based on primary data. The major tool used as instrument for primary data collection was questionnaire set using the theoretical framework. The data had been collected by formulating a set of questionnaire and the questionnaire was distributed to the respondents through e-mail and in hard copy as well.

The respondents filled out the questionnaire following the instructions given in the questions. Then the response was collected from the respondent. The questionnaire was distributed on convenience basis to all the students, housewives, employed and self-employed people as far as possible. The questionnaire were measured using 5 rating Likert scales to create and easy to answer an unbiased questions. Scores on the scale items varies from a low of 1 (strongly disagree) to a high of 5 (strongly agree), with disagree, neutral and agree as interval points.

3.5 Data processing procedure

After completion of data collection, all information were gathered, edited, coded, categorized and properly recorded in SPSS and Microsoft Excel file. Data were processed in manner so that they were accurate and consistent with intent information obtained.

For the presentation of data, several tools like tables, charts, diagrams and graphs were used. Moreover, other tools like mean, standard deviation and frequency distribution were carried out to draw the inference from the collected responses. These data are presented in-depth interpretation as of questionnaire for possible results and conclusion. All the data collected were processed by using Microsoft Excel and SPSS for obtaining the research result.

3.6 Data analysis tools and technique

The main purpose of analyzing the data is to make clear understand of the unprocessed data in order to draw the conclusion from them. Simple descriptive analysis and frequency distribution of relevant information supplemented by percentage and compared means have been used in this study due to simplicity and relevance. Simple frequency distribution tables of types and number of responses translated into percentages were constructed and analyzed. For the analysis and management of data, Microsoft Excel and SPSS tools were used. All the questions of Likert scale were coded and appropriate analysis was done on the data collected. Various tools were used to draw inferences from the collected responses namely:

- i. Descriptive Statistics
- ii. Compare Means

The data was copied on the Excel worksheet where the tables obtained from the SPSS was refined and then used to interpret the results. Mainly statistical tools such as frequencies and descriptive analysis were used for the purpose of generating findings. The correlation between dependent and independent variables were calculated and evaluated on the basis of p-value. The recommendation and conclusion were totally based upon the finding of the study.

3.6.1 Statistical Tools

1. Mean

The mean of a set of the sum of the values divided by the number. The mean can be expressed symbolically as,

$$(\overline{\mathbf{X}}) = \frac{\sum \mathbf{x}}{N}$$

where,

 $\overline{\mathbf{X}} = \mathbf{Arithmetic}$ mean

x = Sum of all the values of variables

N = Number of observations

2. Standard Deviation

The standard deviation measures the absolute description. The standard deviation can be expressed as,

$$(\sigma) = \sqrt{\frac{\sum (x - \overline{x})^2}{N - 1}}$$

where,

 σ = standard deviation

N = Number of observations

 $\overline{\mathbf{X}}$ = Arithmetic mean

3. Correlation coefficient

This statistical tools discovers and measures the relationship. The correlation coefficient always lies between +1 to -1.

$$(\mathbf{r}_{xy}) = \frac{N\sum XY - \sum X \cdot \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

where,

 r_{xy} = correlation coefficient between two variables x and y

when r is +1 there is perfect positive correlation and if r is -1 there is perfect negative correlation but if r is zero there is no correlation.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter is based on the analysis and interpretation of the data collected during the study. The main objective of this research study is fulfilled with the outcomes derived from the analysis of the data. The section is mainly based on the analysis of the data collected through the primary sources i.e. through questionnaires.

This section has been sub-divided into four parts. The first part deals with the respondents' profile. It gives detail information regarding the respondents' gender, age, academic qualification, occupation, monthly income and marital status. The second part analyses and interprets the collected data through descriptive analysis and third section deals and interprets the collected data through correlation analysis between dependent and independent variables. The final part is the discussion of results obtained through analysis.

4.1 Respondents' Profile

In total, 120 respondents were selected for this study and the questionnaire was distributed to them through e-mail as well as in hard copy. In this section, the analysis on demographic components is done along with the interpretation of the primary data. This section mainly deals with the profile of the respondents in table and in figure.

4.1.1 Gender of Respondents

Gender	Frequency	Percentage
Female	44	36.7
Male	76	63.3
Total	120	100

Table 4.1.1: Distribution of Respondents based on Gender

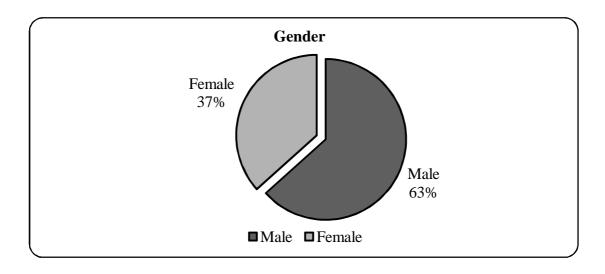


Figure 4.1.1: Gender of Respondents

Table and Figure 4.1.1 shows the gender distribution of respondents. Out of 120 respondents, majority of respondents i.e. 76 are male represented by 63.3%. 44 respondents are female represented by 36.7% of the total respondents.

4.1.2 Age of Respondents

Age Group	Frequency	Percent
18-25	9	7.5
26-35	106	88.3
36-45	5	4.2



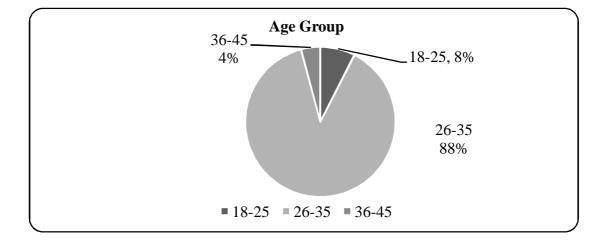




Table and Figure 4.1.2 show the age of respondents. Out of 120 respondents, large number of respondents belongs to age group 26-35 years consisting 88.3%. In addition to this, 7.5% of respondents were of age group 18-25 years and 4.2% were of age group 36-45 years of the total respondents.

4.1.3 Education Qualification of Respondents

Education	Frequency	Percent
Intermediate	7	5.8
Bachelor	35	29.2
Master	77	64.2
Above Master	1	0.8

 Table 4.1.3: Distribution of Respondents based on Education

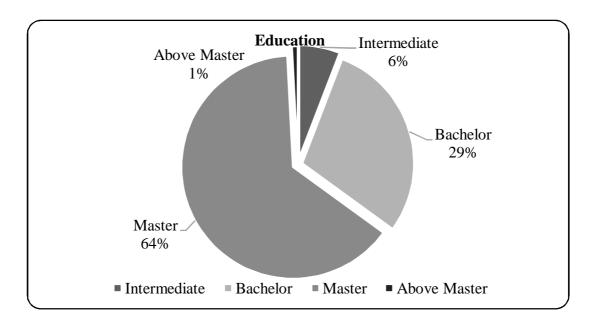


Figure 4.1.3: Education Qualification of Respondents

Table and Figure 4.1.3 shows education qualification of respondents. Out of 120 respondents, large number of respondents i.e. 64.2% have completed Master level, 29.2% have Bachelor level, 5.8% have completed intermediate level and 0.8% has above Master level degree of the total respondents.

4.1.4 Occupation of Respondents

Occupation	Frequency	Percent
Business	14	11.7
Employee	92	76.7
Housewife	4	3.3
Other	3	2.5
Student	7	5.8



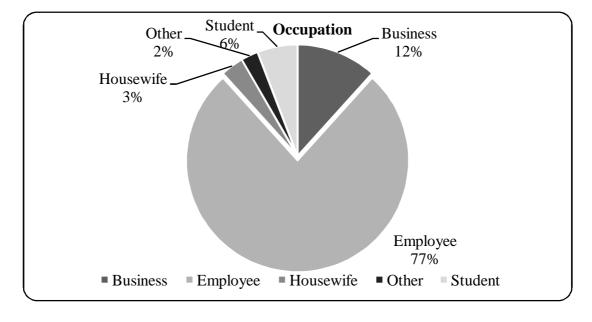


Figure 4.1.4: Occupation of Respondents

Table and Figure 4.1.4 shows the occupation of respondents. Out of 120 respondents, majority of respondents i.e. 92 of them were employees represented by 77%, 14 were business persons by 12%, 7 were students represented by 6%, 4 were housewives by 3% and 3 of them were other people by 2% of the total respondents.

4.1.5 Monthly Income of Respondents

Monthly Income	Frequency	Percent
Below 20,000	29	24.2
20,000-40,000	71	59.2
40,000-60,000	9	7.5
60,000-80,000	4	3.3
80,000 and above	7	5.8

Table 4.1.5: Distribution of Respondents based on Monthly Income

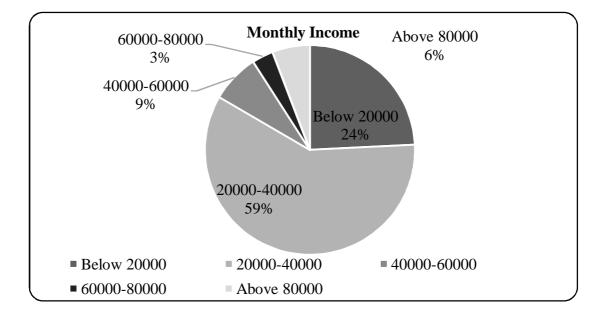


Figure 4.1.5: Monthly Income of Respondents

Table and Figure 4.1.5 shows the monthly income of respondents. Out of 120 respondents, 29 people i.e. 24.2% lies under monthly income group of below 20,000, 71 people i.e. 59.2% lies in monthly income group of Rs. 20,000 to 40,000. Similarly, 9 people i.e. 7.5% lies in group 40,000 to 60,000, 4 people i.e. 3.3% lies in group 60,000 to 80,000 and 7 people i.e. 5.8% lies in group above 80,000 of the total respondents.

4.1.6 Marital Status of Respondents

Marital Status	Frequency	Percent
Married	73	60.8
Unmarried	47	39.2
Total	120	100



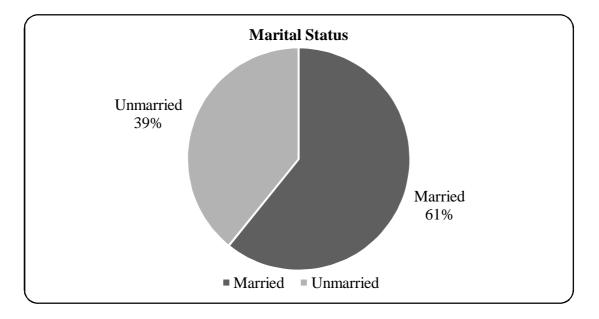


Figure 4.1.6: Marital Status of Respondents

Table and Figure 4.1.6 shows the marital status of respondents. Out of 120 respondents, 73 people i.e. 60.8% are married and 47 people i.e. 39.2% are unmarried of the total respondents.

4.2 Data Interpretation and Analysis through Frequency and Descriptive Analysis

This section presents data interpretation through frequency distribution of respondents regarding Internet Banking Knowledge and Uses and descriptive analysis of independent and dependent variables; Perceived Usefulness, Perceived ease of use, Perceived Risk and Customer Acceptance.

4.2.1 Internet Banking User Status

Internet Banking User	Frequency	Percent
Yes	91	75.8
No	29	24.2
Total	120	100

Table 4.2.1 Internet Banking User Status among Respondent

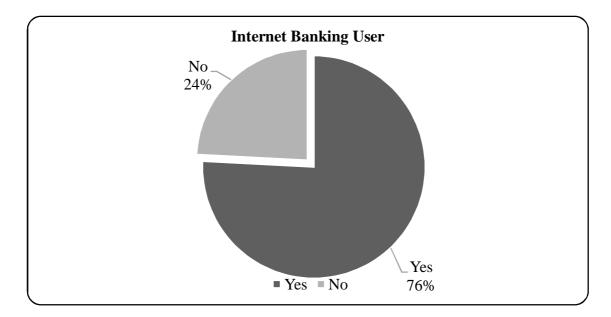


Figure 4.2.1: Internet Banking User Status among Respondents

Table and Figure 4.2.1 shows the Internet Banking User status among the respondents. Out of 120 respondents, majority of the respondents are Internet Banking Users. Only 29 respondents i.e. 24.2% are not using Internet Banking and 91 respondents i.e. 75.8% are using the Internet Banking service. The figure also shows that there is a proper awareness of Internet Banking in Nepalese Bank's customer as the customers find IB easy and less costly. From this study, it is concluded that there is a large and proper market of the use of IB service among the Nepalese Bank's customers.

4.2.2 Use of Banking Channel

Banking Channel	Frequency	Percent
ATM	50	41.7
Internet Banking	33	27.5
Mobile Banking	25	20.8
Teller	12	10
Total	120	100



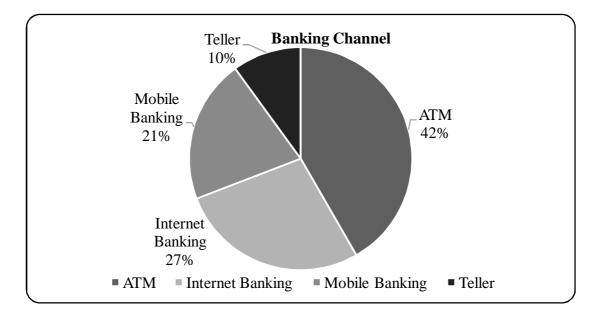


Figure 4.2.2: Use of Banking Channel among Respondent

Table and Figure 4.2.2 shows the use of banking channel among the respondents. Out of 120 respondents, ATM is a mostly used banking channel i.e. 50 respondents represented by 41.7%. Similarly, after ATM, Internet Banking is used by 27.5%, Mobile Banking is used by 20.8% and Teller is used by only 10% of the total respondents. From this study, it is concluded that most of the people in Kathmandu use ATM as a banking channel followed by Internet banking and Mobile Banking and least people use Teller.

4.2.3 Use of Internet Banking Service

Internet Banking Service	Frequency	Percent
Online Statement, Loan repayment details,	44	48.3
cheque status		
Fund Transfer	27	29.7
Utility Payment	20	22
Total	91	100

Table 4.2.3: Use of Internet Banking Service among Respondent

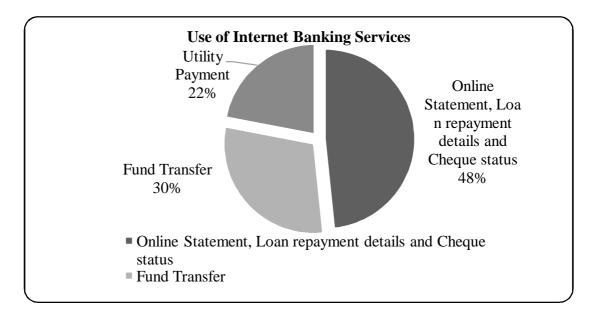


Figure 4.2.3: Use of Internet Banking Service among Respondent

Table and Figure 4.2.3 shows the use of Internet Banking services among the respondents. Out of the 91 Internet Banking users, 44 respondents i.e. 48.3% uses IB for Online Statement, Loan repayment details and Cheque Status. Similarly, 27 respondents i.e. 29.7% uses IB for Fund transfer and 20 respondents i.e. 22% uses IB for Utility payment.

4.2.4 Customer Satisfaction among Internet Banking Users

Customer Satisfaction	Frequency	Percent
Not Satisfied	7	7.7
Somewhat satisfied	36	39.6
Yes I am satisfied	48	52.7
Total	91	100



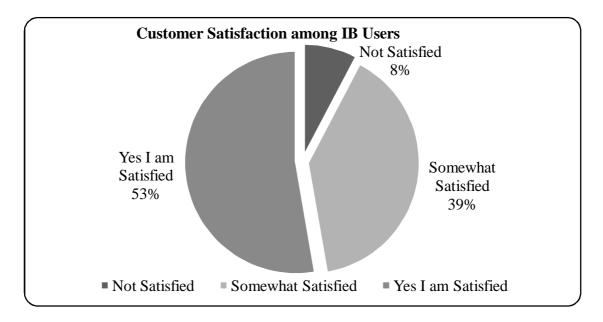


Figure 4.2.4: Customer Satisfaction among IB Users

Table and Figure 4.2.4 shows the customer satisfaction among the IB users. Out of the 91 Internet Banking users, majority of the respondents are satisfied using IB services i.e. 48 respondents represented by 52.7%. Similarly, 36 respondents represented by 39.6% are somewhat satisfied and 7 respondents represented by 7.7% are not satisfied using IB services. From this study, it is concluded that most of the Nepalese Bank's customers are satisfied Internet Banking Users.

4.2.5 Reason behind Not Using Internet Banking

Reason behind Not Using Internet Banking	Frequency	Percent
Difficulty in using Internet	3	10.3
Fear of making an incorrect operation	10	34.5
Security Issue	16	55.2
Total	29	100

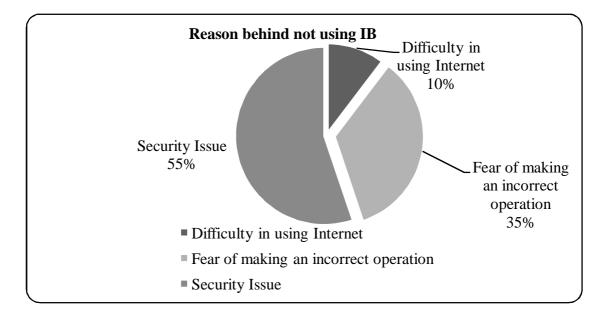


Figure 4.2.5: Reason behind Not Using IB

Table and Figure 4.2.5 shows the reason behind not using Internet Banking. Out of the 29 non-users of Internet Banking, 16 respondents represented by 55.2% do not use IB because of security issue, 10 respondents represented by 34.5% do not use IB because of fear of making an incorrect operation and 3 respondents represented by 10.3% do not use IB because of difficulty of using internet.

4.2.6 Reason behind Using Internet Banking

Table	4.2.6:	Reason	behind	Using	IB
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Reasons	Frequency	Percent
Easy and Convenient	27	29.7
Time saving	34	37.3
24 Hours	16	17.6
Less costly	11	12.1
Curiosity	3	3.3
Total	91	100

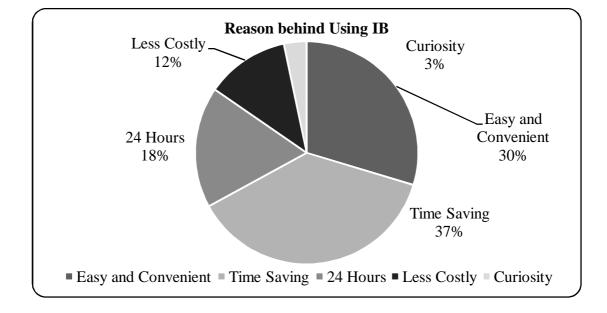


Figure 4.2.6: Reason behind Using IB

Table and Figure 4.2.6 shows the reason behind using Internet Banking. Out of the 91 IB users, 27 respondents represented by 29.7% think Internet Banking is easy and convenient mode of banking transaction. Similarly, 34 respondents represented by 37.3% think IB is beneficial in a sense of time saving, 16 respondents represented by 17.6% think IB beneficial as it is in reach 24 hours. Likewise, 11 respondents represented by 12.1% think it is less costly and 3 respondent represented by 3.3% use IB because of curiosity.

4.2.7 Perceived Ease of Use

The level of agreement of respondents towards perceived ease of use is analyzed based on six items. These items are presented as E1, E2, E3, E4, E5 and E6 which denote the following statements:

- E1: Internet Banking transaction procedures are simple and straightforward.
- E2: Overall Internet Banking is easy and user friendly service.
- E3: My interaction with an Internet Banking is clear and understandable.
- E4: If I have any problem about Internet Banking service, banks provide support.
- E5: Bank gives enough information about the Internet Banking service.
- E6: I have abundant information about the Internet Banking.

Table 4.2.7: Descriptive Analysis of Perceived Ease of Use

	E 1	E2	E3	E4	E5	E6
Mean	3.36	3.84	3.45	3.33	3.18	2.74
Std. Deviation	1.091	1.160	1.003	0.873	0.850	1.192
Minimum	1	1	1	1	1	1
Maximum	5	5	5	5	5	5

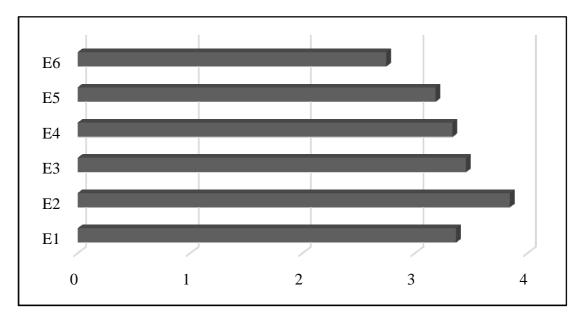


Figure 4.2.7: Respondents' Level of Agreement on PEOU

Table and Figure 4.2.7 shows the descriptive analysis of Perceived Ease of Use. E2 has the highest mean of 3.84 which implies that the Nepalese Bank's customers find the overall Internet Banking easy and user friendly service. E6 has the lowest mean of 2.74 which implies that the customers does not have abundant information about the Internet Banking, so they do not agree with the statement. E1 has mean of 3.36 (which is above mid value range i.e. 3) which implies that the IB transaction procedures simple and straightforward. E3 has mean of 3.45 (which is above mid value range i.e. 3) which implies that the customer's interaction with an IB is clear and understandable. E4 has mean of 3.33 which implies that if customers have any problem about IB service, banks provide support. E5 has mean of 3.18 which implies that banks give enough information about the IB service.

4.2.8 Perceived Usefulness

The level of agreement of respondents towards perceived usefulness is analyzed based on five items. These items are presented as R1, R2, R3, R4 and R5 which denote the following statements:

R1: Internet Banking is less costly than other banking services.

R2: I am satisfied with Internet Banking because I can do transactions immediately and accurately.

R3: Internet Banking can be accessed anywhere.

R4: Internet Banking is more effective, efficient and time saving.

R5: Overall, Internet Banking is useful for me in utilizing banking services.

	R1	R2	R3	R4	R5
Mean	3.78	3.31	4.28	4.12	3.89
Std. Deviation	1.326	1.434	0.796	0.926	1.389
Minimum	1	1	1	1	1
Maximum	5	5	5	5	5

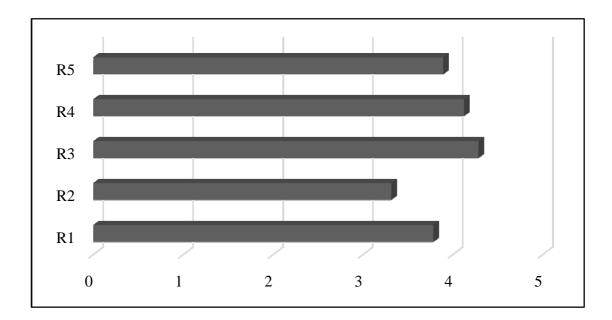


Figure 4.2.8: Respondents' Level of Agreement on PU

Table and Figure 4.2.8 shows the descriptive analysis of Perceived Usefulness. R3 has the highest mean of 4.28 which implies that Internet Banking can be accessed anywhere. R2 has the lowest mean of 3.31 which implies that Bank's customers are satisfied with IB because they can do transactions immediately and accurately. R4 has mean of 4.12 which implies that IB is more effective, efficient and time saving. R5 has mean of 3.89 which implies that customers find the overall Internet Banking useful for them in utilizing banking services. R1 has mean of 3.78 which implies that the Internet Banking services is less costly than other banking services.

4.2.9 Perceived Risk

The level of agreement of respondents towards perceived risk is analyzed based on five items. These items are presented as S1, S2, S3, S4 and S5 which denote the following statements:

- S1: I think my entered personal data is protected during the process.
- S2: It is convenient because it eliminates the risk of carrying cash.
- S3: Websites are safe that offer Internet Banking services.
- S4: I feel safe providing sensitive information about myself over the Internet Banking.
- S5: Overall, the Internet Banking is a safe place to transmit sensitive information.

	S1	S2	S3	S4	S 5
Mean	3.26	4.24	3.00	2.15	2.37
Std. Deviation	0.813	0.979	1.122	1.172	1.156
Minimum	1	1	1	1	1
Maximum	5	5	5	5	5

 Table 4.2.9: Descriptive Analysis of Perceived Risk

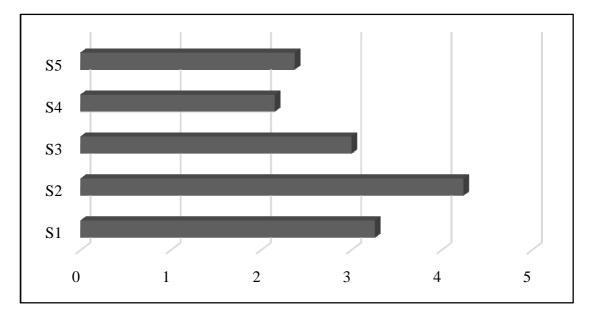


Figure 4.2.9: Respondents' Level of Agreement on PR

Table and Figure 4.2.9 shows the descriptive analysis of perceived risk. S2 has the highest mean of 4.24 which implies that Internet Banking is convenient because it eliminates the risk of carrying cash which means most of the respondents perceives IB is useful and reduce the risk of carrying cash. S4 has the lowest mean of 2.15 which implies that the customers do not feel safe providing sensitive information about themselves over the Internet Banking which means they feel IB as a risky service. S3 has mean of 3.00 which implies that customers are neutral about the websites are safe that offer IB services.

4.2.10 Customer Acceptance

The level of agreement of respondents towards customer acceptance is analyzed based on five items. These items are presented as T1, T2, T3, T4 and T5 which denote the following statements:

T1: Using Internet Banking is a good idea.

T2: I feel that using Internet Banking is pleasant.

T3: In my opinion, it is desirable to use Internet Banking.

T4: I use the Internet Banking for my banking needs.

T5: Using the Internet Banking for handling my banking transactions is something I always do.

 Table 4.2.10: Descriptive Analysis of Customer Acceptance

	T1	T2	Т3	T4	T5
Mean	3.56	3.45	3.25	4.38	4.16
Std. Deviation	1.196	1.130	1.267	1.115	1.206
Minimum	1	1	1	1	1
Maximum	5	5	5	5	5

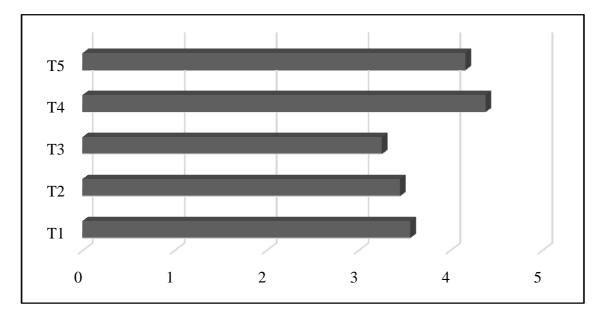


Figure 4.2.10: Respondents' Level of Agreement on CA

Table and Figure 4.2.10 shows the descriptive analysis of customer acceptance. T4 has the highest mean of 4.38 which implies that the customers use the Internet Banking for their banking needs which shows that most of the respondents agree with the statement. T3 has the lowest mean of 3.25 (which is above mid value range i.e. 3) which implies that in customers opinion, it is desirable to use Internet Banking which shows that respondents agree with the statement given to them to some extent. T5 has mean of 4.16 which implies that using the Internet Banking for handling their banking transactions is something they always do.

4.3 Hypotheses Testing

Hypotheses test is a method of statistical inferential using data from a scientific study. It determines whether there exists a significant relationship between variables or not. This study is based on 120 respondents. This section includes the analysis of correlation between dependent and independent variables. Bivariate Pearson Correlation analysis was used to test the relationship between the dependent and independent variables.

4.3.1 Perceived Usefulness and Customer Acceptance of IB

Alternative Hypotheses (H1): There is a significant relationship between perceived usefulness and customer acceptance of IB.

		Perceived	Customer
		Usefulness	Acceptance
Customer	Pearson Correlation	.380**	1
Acceptance	Sig. (2-tailed)	.000	
	N	120	120

 Table 4.3.1: Correlation between Perceived Usefulness and Customer

 Acceptance of IB

Table 4.3.1 shows the correlation analysis between perceived usefulness and customer acceptance of IB. Since p-value is less than alpha i.e. 0.000 < 0.05, the correlation between perceived usefulness and customer acceptance of IB is significant. The Pearson Correlation coefficient of 0.380 indicates that there is positive relationship

between perceived usefulness and customer acceptance of IB. Therefore, Alternative Hypotheses (H1) is accepted and Null Hypotheses (H01) is rejected.

4.3.2 Perceived Ease of Use and Customer Acceptance of IB

Alternative Hypotheses (H2): There is a significant relationship between perceived ease of use and customer acceptance of IB

		Perceived Ease	Customer
		of Use	Acceptance
Customer	Pearson Correlation	.121**	1
Acceptance	Sig. (2-tailed)	.133	
	N	120	120

 Table 4.3.2: Correlation between Perceived Ease of use and Customer

 Acceptance of IB

Table 4.3.2 shows the correlation analysis between perceived ease of use and customer acceptance of IB. Since p-value is greater than alpha i.e. 0.133 > 0.05, the correlation between perceived ease of use and customer acceptance of IB is not significant. The Pearson Correlation coefficient of 0.121 indicates that there is positive relationship between perceived ease of use and customer acceptance of IB. Therefore, Alternative Hypotheses (H2) is rejected and Null Hypotheses (H02) is accepted.

4.3.3 Perceived Risk and Customer Acceptance of IB

Alternative Hypotheses (H3): There is a significant relationship between perceived risk and customer acceptance of IB

Perceived	Customer

Table 4.3.3: Correlation between Perceived Risk and Customer Acceptance of IB

		Perceived	Customer
		Risk	Acceptance
Customer	Pearson Correlation	.200**	1
Acceptance	Sig. (2-tailed)	.046	
	N	120	120

Table 4.3.3 shows the correlation analysis between perceived risk and customer acceptance of IB. Since p-value is less than alpha i.e. 0.046 < 0.05, the correlation between perceived risk and customer acceptance of IB is significant. The Pearson Correlation coefficient of 0.200 indicates that there is positive relationship between perceived risk and customer acceptance of IB. Therefore, Alternative Hypotheses (H3) is accepted and Null Hypotheses (H03) is rejected.

4.4 Discussion

Internet Banking has been a radical technological innovation with potential to change the structure and nature of banking. Internet Banking has evolved and improved over the period becoming an convenient option for handling the banking transactions and thus consumers from all walks of life are taking advantage of the available technology. On this background, the result of customer adoption of IB in Nepal has been discussed. Taking into consideration that the basic objective of the research is to study customer adoption of IB in Nepal, the research was carried on.

Based on the purpose of this study and literature review, the study developed the model which includes customer's acceptance as a dependent variable through customer use of internet banking and three independent variables; perceived usefulness, perceived ease of use and perceived risk. This study focuses on identifying the factors that affects customer acceptance of IB adoption in Nepal. The objective of the research was to identify the relationship between dependent and independent variables. To get the raw data, the questionnaire was developed based on the theoretical framework and the questionnaire was distributed to friends circle and to family members through e-mail and in hard copy by using convenient sampling model.

The respondents of this research were the bank customers. Responses were collected from 120 customers of different banks. Then for data analysis, the raw data were run through SPSS software. At first, respondents profile was generated in tabular and graphical form in order to make easy to read and to analyze the data. Most of the respondents were of age group 26-35 years which is 88% of the total respondents. Only 4% of the respondents were of age group 36-45 years. The majority of the respondents were male bank customers comprising of 63% of the total respondents.

Out of the total respondents, 59% had monthly income of Rs 20,000-40,000. Among the respondents, 76% were using IB and among the IB users, 48% use IB for online statement, loan repayment details and cheque status details, 30% use IB for fund transfer and 22% use IB for utility payment. The study shows that yet people feel risky in online fund transfer because still few people are using IB for fund transfer. Similarly, among IB users, 53% are satisfied in using IB service whatever their banks are providing. Among the IB non-user respondents, 55% of them reported that security issue as major reason behind not using IB and among the IB user, 37% reported that time saving as a major reason behind using IB.

The objective of the research was to investigate the factors that affect internet banking adoption in Nepal. Different dimensions of perceived usefulness, perceived ease of use and perceived risk were used in order to find out the result. Perceived Usefulness showed a significant relationship with customer acceptance of IB with correlation coefficient of 0.380. It implies that customers' acceptance of IB is affected by perceived usefulness. Perceived Ease of Use did not show significant relationship with customer acceptance of IB. Perceived Risk showed significant relationship with customer acceptance of IB with correlation show significant relationship with customer acceptance of IB. Perceived Risk showed significant relationship with customer acceptance of IB with correlation coefficient of 0.200. It implies that customers' acceptance of IB with correlation coefficient of 0.200. It implies that customers' acceptance of IB is affected by perceived relationship with customer acceptance of IB with correlation coefficient of 0.200. It implies that customers' acceptance of IB is affected by perceived relationship with customers' acceptance of IB with correlation coefficient of 0.200. It implies that customers' acceptance of IB is affected by perceived risk.

From the descriptive analysis of different variables, following information can be drawn:

- i. Out of perceived ease of use, most of the bank customers think that the overall Internet Banking is easy and user friendly service and their interaction with an IB is clear and understandable. Customers find IB transaction procedures simple and straightforward and if they have any problem about IB service, bank provide support. However, customers do not have abundant information about the IB.
- ii. Out of perceived usefulness, most of the customers consider that IB can be accessed anywhere and they think IB is more effective, efficient and time saving. Overall, IB is useful for them in utilizing banking services and is less costly than other banking services. Similarly, the customers are satisfied with IB because they can do transactions immediately and accurately.

- iii. Out of perceived risk, most of the customers think IB is convenient because it eliminates the risk of carrying cash and they think their entered personal data is protected during the process. While customers are neutral about the websites are safe that offer IB services. However, customers do not feel safe providing sensitive information about themselves over the IB.
- iv. Out of customer acceptance, most of the customers use the IB for their banking needs and using the IB for handling their banking transactions is something they always do. Customers think that using IB is a good idea and they feel that using IB is pleasant. Similarly, in their opinion, it is desirable to use IB.

Hypotheses testing were conducted to identify the relationship between the variables using correlation analysis. The results obtained from inferential analysis are as follows:

- i. There is significant relationship between perceived usefulness and customer acceptance of IB.
- ii. There is no significant relationship between perceived ease of use and customer acceptance of IB.
- iii. There is significant relationship between perceived risk and customer acceptance of IB.

CHAPTER V

CONCLUSIONS

This is a last chapter of this study. This chapter includes the summary and conclusions drawn from the data analysis. The entire study is divided into three sections. The first section summarizes the study and general overview of the research findings. The second section gives the conclusion drawn from the study. And the last section of this chapter includes the recommendation based on the research work findings.

5.1 Summary

This research is based on the study of Nepalese customers' perspective on Internet Banking adoption in Nepal. The main objective of the research was to study customer adoption of Internet banking in Nepal and to investigate the major factors that affect internet banking adoption in Nepal. The research explores the response of Nepalese customers of different banks of Kathmandu valley. These represent the overall Nepalese bank customers. The study was conducted among 120 bank customers of Kathmandu valley with diverse age, education level and family incomes. This study has been prepared to fulfill the requirements of master of business studies.

At first, literature review was carried out. Based on literature review, a theoretical framework was developed to find out the factors affecting customer adoption of IB. Hypotheses were developed from the study of the literature review in order to identify the relationship between the dependent variables and independent variables. This study has taken three major factors: perceived ease of use, perceived usefulness and perceived risk as independent variables and customer acceptance as dependent variables.

For the study, primary as well as secondary source of data were used. In primary source, a structured questionnaire was prepared and distributed to the respondents. The respondents filled out the questionnaire following the instructions given in the questions. Then the response was collected from the respondent. The questionnaire was distributed on convenience basis to all the students, housewives, employed and

self-employed people as far as possible. The responses were collected by using convenient sampling. SPSS was used for finding out results of data analysis.

The major findings of the research regarding respondents profile are:

- i. Out of 120 respondents, the number of male respondents is 76 which is 63.3% and female is 44 which is 36.7%.
- ii. Out of 120 respondents, large number of respondents belongs to age group 26-35 years consisting 88.3% of the total respondents. In addition to this, 7.5% respondents were of age group 18-25 years and 4.2% of the total respondents were of age group 36-45 years.
- Out of 120 respondents, large number of respondents i.e. 64.2% have completed Masters Level, 29.2% have bachelor level degree, 5.8% have completed intermediate level and 0.8% have above master level degree.
- iv. Among the 120 respondents, 76.7% of them were employees, 11.7% were business persons, 5.8% were students, 3.3% were housewives and 2.5% were other people.
- v. Out of 120 respondents, 59.2% lies in monthly income group of Rs. 20,000 to 40,000, 24.2% lies under monthly income group of below Rs. 20,000. Similarly, 7.5% of total respondents lies in group Rs. 40,000 to 60,000, 3.3% lies in group of Rs. 60,000 to 80,000 and 5.8% lies in group of Rs. 80,000 and above.
- vi. Out of total respondents of 120, 60.8% of them are married and 39.2% are unmarried.

The major findings of the research regarding Internet Banking user status are:

- Out of 120 respondents, 75.8% of respondents were IB users. Similarly, 24.2% respondents were not users of IB.
- ii. Among the 120 respondents, 41.7% use ATM as a banking channel.Similarly, after ATM, Internet Banking is used by 27.5%, Mobile Banking by 20.8% and Teller by only 10%. From this study, we can conclude that most of the people in Kathmandu representing Nepal in this study use ATM as a banking channel followed by Internet and Mobile banking and least people use Teller.

- iii. Among the IB users, 48.3% use IB for online statement, loan repayment details and cheque status. Similarly, 29.7% use IB for fund transfer and 22% use for utility payment.
- iv. Among the IB users, 52.7% are satisfied with IB services, 39.6% are somewhat satisfied and 7.7% are not satisfied.
- v. Among the non-users of IB, 55.2% do not use IB because of security issue, 34.5% do not use IB because of fear of making an incorrect operation and 10.3% do not use because of difficulty in using it.
- vi. Among the users of IB, 37.3% think IB is beneficial in a sense of time saving, 29.7% think IB is easy and convenient. Similarly, 17.6% think IB beneficial as it is in reach 24 hours. Likewise, 12.1% think it is less costly and 3.3% use IB because of curiosity.

Descriptive analysis of the study variables shows that each variable of Perceived ease of use has a mean value between 2.74 and 3.84 which means that in each variable, respondents are agree with the statement given to them to some extent. In conclusion, people perceive Internet Banking as a user friendly and easy means of banking service as it is simple, straightforward, clear and understandable and if they have any problem about IB service, banks provide support. In contrast, respondents are not agreed in the statement regarding information about IB. Similarly, each variable of Perceived usefulness has a mean value between 3.31 and 4.28 which means that in each variables, respondents are agreed with the statement given to them regarding perceived usefulness. Thus, people perceive that IB can be accessed anywhere and is a useful banking service as it is less costly, convenient, more effective, efficient and time saving. Likewise, each variable of Perceived risk has a mean value between 2.15 and 4.24 which means that respondents are agreed to some of the statements given to them. Most of the respondents perceive IB is convenient because it eliminates the risk of carrying cash and they think that their entered personal data are protected during the process. They are neutral about the websites are safe that offer IB services. In contrast, they do not feel safe providing sensitive information about themselves over the IB. Lastly, each variable of Customer acceptance has a mean value between 3.25 and 4.38 which means that in each variable, respondents are agreed with the statement given to them regarding customer acceptance. Most of the respondents use the IB for their banking needs and using the IB for handling their banking transactions is

something they always do. They feel that using IB is pleasant and a good idea. So, in their opinion, it is desirable to use IB.

Hypotheses testing of the study variables show the relationship between the dependent and independent variables. This was done using Bivariate correlation analysis. The summary of correlation analysis and the relationship between the dependent and independent variables is presented as follows:

Alternative Hypotheses (H1)

- 1. There is significant relationship between perceived usefulness and customer acceptance of IB, it is accepted.
- 2. There is significant relationship between perceived ease of use and customer acceptance of IB, it is rejected.
- 3. There is significant relationship between perceived risk and customer acceptance of IB, it is accepted.

The correlation analysis between independent variables and dependent variables are:

- i. The correlation analysis between perceived usefulness and customer acceptance of IB shows that there is positive relation between these two variables with correlation coefficient of 0.380. The analysis resulted in alpha of 0.000, which is less than 0.05 (0.000<0.05) which implies that there is significant relationship between perceived usefulness and customer acceptance of IB.
- ii. The correlation analysis between perceived ease of use and customer acceptance of IB shows that there is positive relation between these two variables with correlation coefficient of 0.121. The analysis resulted in alpha of 0.133, which is greater than 0.05 (0.133>0.05) which implies that there is no significant relationship between perceived ease of use and customer acceptance of IB.
- iii. The correlation analysis between perceived risk and customer acceptance of IB shows that there is positive relation between these two variables with correlation coefficient of 0.200. The analysis resulted in alpha of 0.046,

which is less than 0.05 (0.046<0.05) which implies that there is significant relationship between perceived risk and customer acceptance of IB.

5.2 Conclusion

Internet Banking is the latest in the series of technological wonders of the recent past. ATM's, Tele-Banking, Internet Banking, Credit Cards and Debit Cards have emerged as effective delivery channels for traditional banking products. Banks know that the Internet opens up new horizons for them and moves them from local to global frontiers. Information technology developments in the banking sector have sped up communication and transactions for clients. It is vital to extend this banking feature to clients for maximizing the advantages for both clients and service providers. Fund transfer, utility payment, mobile recharge, online shopping are the facilities provided by internet banking. Thus, IB has major advantages of convenience and 24*7 services. Although it is fast, easy and efficient mode of banking, however customers are still reluctant to adopt the system because of the risk associated with it. Therefore, it is important to study the behavioral intention of customers to use IB services and the factors that influence customers' intention to adopt IB so that banks can better formulate their marketing strategies to increase internet banking usage in the future.

This study was conducted to explore the factors influencing intentions to adopt IB services. From the data analysis, the study concluded the factors and their relationship with the customer acceptance of IB. At first, the respondents profile is shown in the tabulated form and in pie chart. Secondly, the Internet Banking User profile is shown addressing the questions like how many respondents uses IB, what make them use the service, how many do not use IB and what make them not to use IB. The study showed that majority of respondents use IB and they use it because they think IB is beneficial in a sense of time saving and few respondents do not use IB because of security issue. Lastly, the relationship between perceived usefulness, perceived ease of use and perceived risk with adoption of Internet Banking in Nepal is analyzed by using correlation model.

The study showed that majority of respondents are Internet Banking users. There is a proper awareness of IB among the Nepalese bank's customers as the customers find IB easy and less costly. So, it is concluded that there is large and proper market of the

use of IB service. Similarly, most of the respondents are satisfied Internet Banking Users.

The study of descriptive variables showed that the overall, Internet Banking is easy and user friendly service and it was found that customers interaction with an IB is clear and understandable. IB can be accessed anywhere and is more effective, efficient and time saving. Also, customers are satisfied with IB because they can do transactions immediately and accurately. So, overall IB is useful for them in utilizing banking services. Most of the respondents think that IB is convenient because it eliminates the risk of carrying cash. Customers were found to be neutral about the websites are safe that offer IB services. Also, it was found that customers use the IB for their banking needs and they feel that using IB is pleasant and is a good idea.

Lastly, the inferential analysis of the study variables concluded that there is significant relationship between perceived usefulness and customer acceptance of IB. However, the analysis showed that there is no significant relationship between perceived ease of use and customer acceptance of IB. Similarly, the study showed that there is significant relationship between perceived risk and customer acceptance of IB.

5.3 Implications

Findings of the study may provide guidance to the Bankers and customers. On the basis of analysis and findings of the study, following suggestions and recommendations can be outlined:

In Nepalese context, Internet Banking is a growing banking service. In present scenario, according to the research, more than 70% of bank's customers are using Internet Banking. But the limitation of the research is that it is done by taking only 120 samples in Kathmandu valley only where most of the educated people live. Thus, even in the very educated city, only 70% use Internet Banking which shows that there are still many people that are unaware of Internet Banking. Thus, bankers should tap those untapped market. In addition, banks should also educate their customers on Internet Banking. To access more potential adopters, information about Internet Banking should be provided by bank teller and bank assistants at branches. The

information should include references to time saving, convenience, at anywhere anytime, low cost and information availability.

Practical implication of these results is that banks need to highlight the benefits of IB, make IB easy to use, and enhance IB security to improve consumers' trust. They also need to make the consumers aware about the system by providing them about the details of the benefits associated with it and also ensuring security of the system. Banks can highlight benefits such as IB conveniences in their promotional and advertising activities. The IB interface could be made simple.

Similarly, it is recommended that bank should invest some resources in understanding the needs of customers regarding internet banking service and try as much as possible to meet their various needs associated with the internet banking services.

Likewise, it is recommended to all customers that they should use Internet Banking service provided by BFIs as it is convenient, time saving, cost effective and so on which will ultimately help in improving their living standard and helps in economic growth of the nation. Customers using Internet Banking should also provide their valuable feedbacks to the service provider so that they can always improve their service.

Last but not the least, Banks should always make their service secured as far as possible because most of customers think their transactions are not safer and their information is not secured. Thus, banks should always ensure transactions and information generated through Internet banking are secured. Banks need to engage in security enhancement activities. Trust is one of the more influential factors, implying that controlling the risk of online banking is more important than providing benefits. This finding is particularly important for managers as they decide how to allocate resources to retain and expand their current customer base. Therefore, online banking companies need to search for risk-reducing strategies that might assist in inspiring high confidence in potential customers.