



# Master's degree thesis

**LOG950 Logistics**

**Examining the impact of service quality dimension on customer satisfaction**

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Number of pages including this page: 97

Molde, 24 May 2019



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## **Preface**

This thesis is submitted in the partial fulfillment of the requirement of Master of Science in Logistics degree. It was written at Molde University College – Specialized University in Logistics.

First and foremost, I would like to thank God for his grace and blessing until this this is finished.

I would like to express my earnest gratitude to Professor Arnt Sture Buvik for being my supervisor and for his direction all through the way toward my research.

At long last, yet not least my family and friends for their everlasting help, consolation, care and confidence in me a lot of things would have been unthinkable.

## **Summary**

### **Purpose:**

The objective of this study was to investigate the multifactor structure of customer satisfaction to get insight into the service quality attributed to the website as well as the privacy and the security.

### **Design/methodology/approach**

The sampling frame of this study was the online banking users of Nepal centralized in the Kathmandu. Furthermore, a quantitative research method with a descriptive research design was conceded for the extraction of 134 responses. A hierarchical regression analysis was used to test the hypothesized relationship.

### **Findings:**

The main findings are as follows: service quality dimension presented in the form of the website attribute and the privacy and security possess a positive association with the customer satisfaction; the switching cost also hold a significant relationship with customer satisfaction positively; the act of introducing the switching cost in the relationship gives the signature understanding of website attribute along with the privacy and the security of online banking with the contrasting effect of interacting variable.

### **Theoretical Implications:**

This study contributed to the existing literature of e-CRM which follows the established path of association between the service quality dimension and customer satisfaction in online banking of Nepal.

### **Managerial Implications:**

The unique contribution of this research is that in the consistency of the positive relationship between website attribute and customer satisfaction, customers with lower switching cost has the higher influence of privacy and security of online banking for determining customer satisfaction. In contrast, website attribute is the focal service quality dimension for boosting customer satisfaction in the group of lower switching cost customers.

## List of Abbreviation

CS	Customer Satisfaction
Web	Website attribute
PAS	Privacy and Security

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## **1.0 Introduction**

This is the initial chapter reflecting the overall background of the study, research problem highlighting the need of research, objectives of the study, significance of the study, scope and impediment of the study.

### **1.1 Background Information:**

Customer Relation Management is a mechanism constructed for detecting, satisfying and maintaining the customers for the mining of the greatest possible business advantage out of the best customers (Rigby, Reichheld, and Scheffer 2002). It is the core business strategy which coordinates every business process engaged from the customer acquisition to the customer retention for maximizing the profit of the organization (Ahuja and Medury 2010). The impact of CRM has covered high scope in the service industry. In face of the challenges of global competition, a customer is a focal player holding the ultimate trump card of business existence (Buttle 2004) whereas; quality is the keyword for the survival of the organization. The expectation of the customer to acquire; prudent service with an insightful statement regarding quality has revitalized the organization to redefine its service (Parasuraman, Zeithaml, and Berry 1985), (Amoah-Mensah 2016). This phenomenon has urged the wider customer-centric infrastructure with radically new avenues. In order to address the proliferation of technology-based system, lately, CRM has broadened its scope in the context of an online platform as well. The unavoidable demand of customers presented in the form of technological improvement along with the competitive market scenario the interest of the organization has shifted to the E-CRM. It is the extended strategy of CRM, which is composed of divergent aspects to manage the customer relationship in an online platform (Ahuja and Medury 2010).

Today, the importance of the service in attaining the core value of the business is higher than the accountability of the resources highlighting the concept of e-CRM (Tiwana and Ramesh 2001), (Ross 2005). The concern of e-CRM is sequential growth in the relationship with customer through acquiring potential customers, retaining the existing customer to the maintenance of the customer loyalty (Buttle 2004) by from the buyers perspective. The entry of technical enhancement with the need for customer convenience and comfort has highlighted the scope of an online platform for an organization as a business opportunity.

The demand for dynamic challenges in the competitive market has grasped the attention of online platform in the banking sector of Nepal. However, the concern of the e banking is revolving around acceptance from the customer side: reflecting potential aspects of CRM in banking sector (Banstola 2007). In the context of online banking, customer satisfaction has

been revolving around the technology acceptance and risk avoidance which was the need of infancy stage. So, in order to attract and retain customers in online banking, now it's time to focus on the quality aspects as well. (Vesna, SneEsana, and Boris 2017)).

Therefore, the importance of the understanding relationship between the service quality dimension and customer satisfaction is crucial for the proper management of online customers to optimize banking performance. However, the relationship between customer satisfaction and the service quality dimension should be in light of switching cost.

### Banking sector in Nepal

The major services provided by bank under internet banking in Nepal are as follows:

Table 1: Services offered by online banking Adopted from: (Khatri and Upadhyaya-Dhungel 2013)

<b>Account Information Service</b> Account Details Account Statement Check Book Request-stop Activity log	<b>Fund Transfer</b> Transfer within same bank account Transfer to another bank account (within Nepal) Standing order requests for periodic payments
<b>Bill Payment</b> Merchant Payment NT postpaid NT Landline Preferred Merchant Bill payment Log	<b>Credit Card Management</b> Credit Card Payment Request to increase credit card limit Credit card transaction review
<b>Personal Updates</b> Change contact details Change Address Information Change email, phone number information Change password	<b>Contact bank:</b> Message customer service. Fill up grievance form.

## 1.2 Research Problem

It was early 1980's when the concern of the quality evaluation of services grabbed the attention in the industry and it was introduced by (Grönroos 1984) in the literature of service from the marketing perspective. In that phase, relationship of customer satisfaction and the service quality of bank was limited because of unstable marketplace with penetrating competition. Later, this phenomenon was addressed by many researches, which forwards the detailed understanding in retaining the customers with the help of quality services (Levesque and

McDougall 1996, Bloemer, De Ruyter, and Peeters 1998, Lassar, Manolis, and Winsor 2000, Culiberg and Rojšek 2010). However, those studies are limited within the retail banking. This research has focused the online platform for depth understanding of relationship of bank with its customer influenced from internet to address the gap of study required in banking sector. Thus, this research is carried out to identify the major service quality dimensions of Nepalese online banking sector possessing the potential of extending and strengthening the relationship of the bank and the customer. This study intends to analyse the impact of quality dimensions of online banking service and the customer satisfaction in the influence of the switching cost

The previous study made in the context of online banking for examination of customer satisfaction and the service quality dimensions are (Wang, Tang, and Tang 2001, Sadeghi and Heidarzadeh Hanzaee 2010, Ganguli and Roy 2011, George and Kumar 2014). However, the presentation of the relationship between these variables is processed from the marketing perspective.

Service evaluating factors are the crucial components in service industry which can assist the sellers to uplift the quality of service in the favour of their business (Parasuraman, Zeithaml, and Berry 1985). The focus is in the implementation of the online platform as a business operation for exploring its impact on customer satisfaction. The gist of this research is to track the service quality dimensions of online banking to stand out from the retail banking in order to address the need of users.

- Which service quality dimensions stands out unique from retail banking in driving the customer satisfaction of Nepalese online banking users?
- What is the impact of the switching cost in the existing relationship of customer satisfaction and service quality?

### **1.3 Objective of the Study:**

The major objective of the study is to examine and understand the buyer-seller relationship in online banking of Nepal. This study is carried out to identify the fundamental service quality dimensions of online banking and its impact on customer satisfaction considering the presence of the switching cost. Moreover, the specific objectives of the study are as follows:

- To identify the major service quality dimension of online banking affecting customer satisfaction in Nepalese bank.
- To assess the degree of each dimension in structuring customer satisfaction in online banking of Nepal.
- To measure the impact of switching cost in the relationship of the service quality dimensions and customer satisfaction.

## 1.4 Significance of the Study

In recent years, the service sector has gone through tremendous changes. The impact can be observed from 100 % increment in International trade within the span of twelve years, which was reported to be 5320 billion in 2017. The share of developing economics exports in service has increased to 30% during the same period (Collins 2018). In this regard, Nepal is one of the developing countries, which has enormous potential and opportunities in the service sector especially in the banking sector (Demetriades and Luintel 1996).

This study will provide a comprehensive framework of service quality dimensions and its impact on customer satisfaction. This research attempts to extend the territory of limited research which focus on retail banking (Levesque and McDougall 1996, Bloemer, De Ruyter, and Peeters 1998), (Siddiqi 2011), (Ganguli and Roy 2011) by introducing online banking as a content of the research. Subsequently, the concept of switching cost is also studied with its impact on customer satisfaction. The research conducted in Nepalese online banking sector revolved around the challenges along with the pros and cons of online banking (Demetriades and Luintel 1996, Banstola 2007, Khatri and Upadhyaya-Dhungel 2013). Whereas, this research forwards the key service quality, which can enhance the banking service to fascinate and retain the customers to maintain long-term relationship leading to the goal of banks known as profit (Demirgüç-Kunt and Levine 1999).

Clearly, the association between service quality dimensions, customer satisfaction and switching cost theoretically and managerially warrant more attention. Therefore, this research presents the well-established concepts such as service quality in the banking sector operating an online platform to plan, formulate and exercise the significant service quality in future.

## **1.5 Scope and delimitation of the Study**

This research measures and examines the relationship between service quality dimensions, customer satisfaction and the impact of switching cost in the context of online banking in Nepal. In terms of market coverage, the capital city of Nepal “Kathmandu” is taken into consideration. It is simply because urban areas are the target market of the banking sector for online banking as 50% of internet users of Nepal belong to the Kathmandu valley (Khatri and Upadhyaya-Dhungel 2013). To extract the concrete understanding and the strength of online platform in business the study was confined only on internet banking. However, this research can be used to improve online platform service in all sectors of developing countries as it forwards the expectations and perception of internet service users in banking sector highlighting the gap that reflects the potential for betterment.

## **2.0 Theoretical Framework and Literature Review**

### **2.1 Service Quality:**

The term quality of service is enticing the concern of every organization day by day. It is an impactful component possessing the strength of upgrading the business as well as the potential factor for the failure of corporate. Reviewing the history of the quality in academic research it leads to mid of 20<sup>th</sup> century where Ragan distinguished service operation from the product manufacturing. The revolution of the quality of service is alienated into two waves starting from the 1960s to 1990 and 1960s to ongoing. In the early wave core of discussion was differentiating the service from the product. In this phase intangibility, perishability, heterogeneity, and simultaneity were presented as evolving factors of service quality, whereas the ongoing wave revolves around the precise dimension of quality based on categories (Van Ree 2010).

#### **2.1.1 Definition of Service Quality:**

Initially, the concept of service quality was introduced to address phenomenal evolution in the service industry. The exceptional features of service such as intangibility, heterogeneous and inseparability created the complexity in scheming standard definition of service quality. However, (Grönroos 1984) managed to outline service quality from the standpoint of the customers, highlighting the three dimensions known as functional, technical and the image. The functional aspect forwards the service delivering method; technical aspect focuses on the result of service whereas overall assessment of the company providing the service is prominent in the image dimension. (Parasuraman, Zeithaml, and Berry 1985) defined service quality as a degree of stability that an organization maintains for enhancing the efficiency of service where the expectation of the customer is inveterate with the benefits conveyed to them. In contrast, (Gummesson 1991), (Cronin Jr and Taylor 1992) delineated service quality as a long-term assessment of organization in an extensive form where the base for evaluation stands on the desired viewpoint of a whole industry and the service quality revolves around the gap that organization failed to maintain from the customer's expectation.

In these progressive extensions regarding the scope of service quality customers gained the mutual acknowledgment as the key player and the foundation of quality. The core factor of service quality is efficiency, which can enhance the competency of an organization. It is



clarified from the definition of (Hussain, Al Nasser, and Hussain 2015) that the quality of service is the collective form of judgment extracted from the evaluation made on the satisfaction of customer and the expectation influenced from the image of the organization.

### **2.1.2 Service quality in online platform:**

Online service quality is defined as the level of efficiency and effectiveness which online platform maintains during the complete purchasing process; starting from web search to the point of transaction where the delivery is made to the customer (Janita and Miranda 2013). Research on service quality has been carried since the 1970s and the remarkable findings has been found in the field of banking sector (Schneider, Parkington, and Buxton 1980), health care (Taylor and Baker 1994, Lee 2017) and in service industry (Parkington and Schneider 1979, Rifat, Nisha, and Iqbal 2019).

*“There are many opportunities for something to go wrong when the service provider and the customer interact”*. This statement highlights the potential scope of the error in the case of frontal interaction processed for the delivery of the service. The term service quality itself is an enormous topic so it is divided into three domains known as service quality, e-service quality and e-government service quality for the depth understanding of service sector (Al Balushi and Ali 2016). In the context of an online platform for business functioning, it has come into consideration since the 1980s (Madu and Madu 2002) (Van Riel, Liljander, and Jurriens 2001) presented five components of online service in which one important element is the core service, whereas the rest of four crucial elements are facilitating service, supporting service, complementary service and the user interface. The augmented factor, which extend the concept of service in the virtual market, is the significance given to customers’ involvement and communication (Santos 2003).

Among the four types of e-commerce, this research is all about the business to customer model where the key player is customers participating in the online transaction (Madu and Madu 2002) The unavoidable technical innovation going in the market demand the participation of organization in the e-marketplace. In addition, defensive strategy to back up competitors, as well as operational efficiency, gained in supply chain management drive the interest of the organization to actively perform in the online marketplace (Chian-Son 2007).

### **2.1.3 Measurement of service quality**

In this study, logistics service quality is regarded as the antecedent of the customer satisfaction whereas in general service quality is the base of many aspects of CRM indicating the interest of the customer to remain in the business for long-term basis (Parasuraman, Zeithaml, and Berry 1988). The factors of the service quality have covered the wide range of the scope depending on the field of the literature. There is various measurement model presented by various researchers. Therefore, enormous research made in the literature on service quality can be comprehended. While considering the measurement model of the service quality then we can find two critical aspects taken into consideration for the assessment of the quality of the service.

#### **Disconfirmation approach**

This approach highlights the disconfirmation attained from the expectation regarding the service with the perception created after the consumption of the service (Parasuraman, Zeithaml, and Berry 1985). The initial concept of the service quality, the measurement was established by (Parasuraman, Zeithaml, and Berry 1988), which covered 22 variables scale which covers the critical five dimensions of the service quality. However, the contribution of this approach could not avoid the loophole it possesses in terms of ambiguity time allotment. The deviation in the expectation of the customer over the specific service was observed and the performance which is the baseline of the measurement approach was not defined clearly (Parasuraman, Zeithaml, and Berry 1985), (Parasuraman, Zeithaml, and Berry 1988).

#### **Performance-based approach by**

This is the measurement model (SERVPERF) which came into existence to eradicate the gap of the SERVQUAL model. In this approach perception is regarded as the baseline for the measurement of service quality. The specification made by the scholars regarding the perception which is after the consumption of the service enhanced the measurement of the service quality, so it was supported by many scholars such as (Jain and Gupta 2004) (Abdullah 2006, Carrillat, Jaramillo, and Mulki 2007). In the context of online banking, various model has been developed for the assessment of the service quality influenced from the SERVPERF such as **WEBQUAL**. It was introduced by (Barnes, Liu, and Vidgen 2001) in mobile banking where the focal concern was website attribution evaluation of the new site. Then various search as has been carried with the help of this model in the service assessment of the online banking (Zarei 2010), (Kumbhar 2011), (Sakhaei, Afshari, and

Esmaili 2014). WEBQUAL measurement model followed the E-SQUAL (Parasuraman, Zeithaml, and Malhotra 2005). There are various dimensions of service quality for the measurement of the service quality. There is various research carried for measuring the service quality.

Here, the author has used the two-service quality dimension Website attribute and the Privacy and security for the measurement of the service quality. The selection of these two dimensions is on the ground of community found in the above-mentioned measurement model highlighting the context of the online banking of Nepal.

## **2.2 Customer satisfaction**

Unarguably, customer satisfaction is the most discussed topic of this era, which is, regarded as the Holy Grail amount many organizations (Godson 2009). Since the derivation of word satisfaction, its meaning has shifted from enough to do to the relief from indecision, whereas the focal theme has always been to deliver value to the customers (Oh 1999), (Aigbavboa and Thwala 2013). (Oliver 1981) contribution by introducing expectancy disconfirmation theory has outlined the concept of customer satisfaction in the literature which has also contributed in the remarkable findings made by (Fornell 1992) in detecting customer satisfaction barometer in national level. This contribution in the literature was followed by (Anderson and Sullivan 1993) in vindicating the elasticity of the customer repurchase intention with respect to the customer satisfaction, (Anderson, Fornell, and Lehmann 1994) in synchronizing the interrelationship between service quality and customer satisfaction and (Cronin Jr, Brady, and Hult 2000) in reflecting the relational path between the service quality to the consumer behaviour led by the satisfaction.

In the course of conceptual development of the customer satisfaction, various theories have been formulated in terms of Dissonance Theory, The Contrast Theory, Expectancy-Disconfirmation Theory, The Comparisons Level Theory, Value Perception Theory, Importance Performance Model, The Attribution Theory, The equity Theory, The Evaluative Congruity Theory and the person situation fit concept (Yüksel and Yüksel 2008). the acknowledgement of the concept e-satisfaction from the early 21<sup>st</sup> century, it has been in the limelight in the market as well as in the literature (Szymanski and Hise 2000), (Anderson and Srinivasan 2003), (Yang 2008). In regard of online banking, E-customer satisfaction articulates critical factor of satisfaction with respect to the online platform. The online platform used by the digital service formulates and amplifies the various aspects of information-oriented service of online banking regarding customer information satisfaction

(Wang, Tang, and Tang 2001). This study is grounded on the bricks and clicks banking industry where the overall satisfaction of the customer is partially affected by the retail banking service as well (Ghazali et al. 2016).

### **2.2.1 Importance of measuring customer satisfaction**

Customers are a crucial stakeholder of an organization who stands for the payment, consumption and the judgement of the service, which makes the satisfaction of the customer as a crucial aspect for the maintenance of long-term sustainability and the profitability of the business (Maričić Branko, Veljković, and Đorđević 2012).

The assessment of customer satisfaction is the creation of a happy customer embraced with the calculative analysis of long-term success considering profit and loss, which provides comprehensive insight information of service, and the customer which assists in acknowledging the potential scope of improvement in amplifying consumers respond positively in service. It represents the customer perception regarding the service offered by the organization, which signifies the current market position of the organization along with the future estimation of the customer's behaviour (Cengiz 2010).

The measurement of customer satisfaction greatly assists in addressing the gap of service performance and the expectation of the customer in order to enhance the business process (Cengiz 2010).

### **2.2.2 Customer satisfaction in online banking sector**

The extensive coverage of customer satisfaction in the manufacturing and the service industry is undeniable. However, in the case of technology-enabled service industry customer satisfaction has more to explore. It is one of the standard customer-centric metrics for the measurability of all sorts of products and the services at the universal level (Ganguli and Roy 2011). Considering the previous consideration, this research highlights the scope of customer satisfaction in the course of online banking.

The replacement of the service offering outlay form retail to the online platform gives the new dimension to the concept to satisfaction aspects of the customer relationship management. The approach of service delivery carried through the internet makes online banking customer satisfaction as the customer information satisfaction. (CIS). In the context of the CIS, the role of the website in determining the level of satisfaction is crucial (Wang, Tang, and Tang 2001). (Yoon 2010) conducted customer satisfaction measurement in an online platform where the six antecedents were examined where the finding was concluded

with the strong positive impact of design, speed, security, information content to customer satisfaction. The technical aspect of the operation leads to the finding that the frequency of online banking is higher in the group of highly educated people (Sadeghi and Heidarzadeh Hanzaee 2010).

The origin of online banking service can be traced back to the 1990 form the contribution of the Stanford Federal Credit Union (SFCU) in October 1994 (Engel, Blackwell, and Miniard 1995). This breakthrough in the banking industry grabbed the interest of customers and the banks at the international level. The proliferation of the technology-based service along with the spurred from the customer demanded the studies about online banking which (Aladwani 2001), (Cheng, Lam, and Yeung 2006) addressed. This study, which revolves around the drives and the challenge of online banking satisfaction, was followed by the studio related to the online banking acceptance with respect to the technological aspect of online banking (Shin 2009), (Yee-Loong Chong et al. 2010). After this phase, the concern of the researches shifted to the attitude, perception and the cultural factor of online customers (Laukkanen 2016), (Khan, Hameed, and Khan 2017). The literature on customer satisfaction of online banking users has contributed to providing a better understanding of this field. However, customer satisfaction is a small part of the research where the focus has been given to the service quality or the customer retention aspect. Today, the gradual increment in the expectation of customer regarding the quality of online banking service in terms of serenity, resilience, has highlighted this field and grabbed the attention of researchers and bank managers (Sadeghi and Heidarzadeh Hanzaee 2010). Hence, the main objective of this research is to tack drivers of customer satisfaction for the profound understanding of the context of the online platform.

### **2.3 Switching cost**

Generally, switching cost is the aggregate cost incurred in terminating the existing supplier presented in terms of monetary value, the psychological effort, safety-related and time invested by customers who are dissatisfied with existing service (Chadha and Kapoor 2009). The theoretical perspective of switching cost reflects the better understanding of the customer for extending the duration of relation. Additionally, the practical viewpoint provides the influential tactics for implying customer's opinion regarding the switching cost for the favour of organization (Jones, Mothersbaugh, and Beatty 2002). The questionnaire designed for this research is composed of six dimensions of the switching cost known as pre-switching cost composed of the search and the evaluation cost. This cost is following

the **cost of lost performance uncertainty cost, post switching behavioural cost, setup cost and the sunk cost** (Jones, Mothersbaugh, and Beatty 2002) (Barroso and Picón 2012). In some of the studies, six dimensions of the switching cost is perceived in an aggregate individual impact on the relational aspect of the customer and the service providers i.e. the impact of one dimension of the SC is strong enough to change the next dimension equivalent with respect to the other factors. This concept of switching cost is challenged by (Barroso and Picón 2012) and clarifies the tradition conceptual. In the construction of complete concept of switching cost regarding specific service, each dimension has its unique contribution standing individually in the overall SC perception (Barroso and Picón 2012). In this study, author has used six dimensions of the SC in determining the impact in existing relationship of the service quality and the customer satisfaction of the online banking.

### **2.3.1 Dimension of the switching cost**

Though, switching cost greatly acts in the favour of the organization to maintain the market share its impact on the customer is encumbrance (Kim, Kliger, and Vale 2003). The concept of switching cost comes along with the complexity of its scopes, as it is the latent variable where six aspects of the SC must be considered. These six dimensions are further divided into three based on the categories, which are:

#### **Learning cost:**

This is the cost associated with the process carried prior to the use of the service with the new supplier. It consists of three-sub cost, which is as follows:

#### **Pre/switching search cost and the evaluation cost:**

This is the cost incurred in terms of the effort invested in making the comparative analysis between the relied service provider and the possible service provider in which bank the customer thinks of switching.

#### **Post switching behaviours:**

As the name suggests, this aspect of the switching cost covers the effort that the customer must invest in using the new system with the same comfort and convenience.

#### **Setup cost:**

This is the initial associated with the process encountered in getting into the relationship with the shift in the service provider. Here, the study is in the context of online banking where the set-up cost can be seen in the effort of customer account opening form (Jones, Mothersbaugh, and Beatty 2002).

#### **Sunk cost:**

In every relationship customer, invest a certain amount of financial, emotional and physical effort, which is retrievable. This cost highlights the psychological aspect that the customer must go through while deciding on switching the service provider (Jones, Mothersbaugh, and Beatty 2002), (Guiltinan 1989).

**Continuity cost:**

**Lost performance cost**

The duration of the relationship along with the personal relationship the chances of getting customized service with the special offers to the customers. The loss of such benefits in the case of shifting to the next service provider is the cost associated with the lost performance cost (Jones, Mothersbaugh, and Beatty 2002).

**Uncertainty cost:**

The switching decision of the customer comes with the comparative evaluation of the service provider with the possibility of getting some positive impact in the service setting. However, the use of a new service cannot guarantee the service customers which customer had expected. This cost incurred when the customer terminates the relationship (Schmalensee 1982).

### **2.3.2 Antecedents of the switching cost**

Antecedents of the SC are those factors, which drives the customer to perceive the SC with respective to the service offered by the organization. There are two types of the antecedents influencing the perceived switching cost of the customers. Initial one is the relationship characteristic and the later, the customer characteristic (Barroso and Picón 2012).

**Relationship characteristic:**

It revolves around the relational factor between the customer and the service provider in the length and the breadth of the relationship is taken into consideration. It is the crucial factor, which observes the relational aspect is the time duration of the connection between the buyer and the supplier. In general, the duration has a positive association impact in the association between the antecedents and the switching cost (Chiao, Chiu, and Guan 2008), (Barroso and Picón 2012) The next relationship characteristics in determining the SC is the breadth of the relationship, which focuses the dependency of customer on the supplier beside the main service for which the relationship is established between them.

**Customer Characteristics:**

Customer characteristics is the reference point for this antecedent of the SC where, involvement of the customers and the propensity for the switching come into play for

creation of the perceived switching cost. Propensity for switching is the external zone for the organization as it completely relies in the customer's sceptical nature regarding the judgement made on the service. In this case, excitement of using different services along with the knowledge of alternatives. Another aspect of the characters of the customer in which personal relevance assists in shaping the SC to the customers. (Pablo Maicas Lopez, Polo Redondo, and Sese Olivan 2006).

The scopes of switching barrier associated with the switching cost is extended to the five aspects while making an entrance to the online platform such as

***Perceived switching cost***

***Attractiveness of alternative*** and

***Interpersonal relationship,***

***Service recovery*** and ***Inertia*** (Ghazali et al. 2016), (Amoah-Mensah 2016).

The dependency created in the form the higher switching cost creates the exit barrier for the customer (Liu 2006). However, it can only be possible if the switching cost covers the underlying core value from the customer's perspective by synchronizing it with the relational factor and the customer characteristics (Liu 2006), (Barroso and Picón 2012). The intensity of switching cost in framing the relationship between the components the service quality and the customer loyalty mediating through customer satisfaction has been covered by many researchers in retailing concept (Chang 2010), (Lam et al. 2004), (Han and Sung 2008) followed by the digitalized platform (Barroso and Picón 2012), (Karr 2012), (Ghazali et al. 2016) There is no doubt in the importance of findings made by these research papers. However, the role of customer satisfaction as an influencing factor to the rest of the service quality variables and the switching cost interaction is underestimated. Recently, the analysis of the relationship of online service quality and its stimulus on the sole dependent factor customer satisfaction deserves the attention, which is the major scope of analysis of the researcher. Therefore, the switching cost possessing the potential to restructure the interrelationship between of service quality and customer satisfaction with the intensity of Diverting the direction of the relation is analysed through the service quality perspective in this paper. Initially, the impact of switching cost in customer satisfaction is examined for the depth understanding of each variable, which follows the investigation of the interacting relationship.



## 2.4 Perceived switching cost for the online banking customer

The latest delivery channel introduced by the banking industry has a double impact on competitiveness. The initial one is the association it possesses with the low switching cost as it minimizes the gap with the rival firms in the form of the distance of few clicks along with the business strategy implied as a competitive advantage. It twisted the common relationship of switching cost and customer satisfaction (Aladwani 2001), (Chen and Hitt 2002), (Giovanni Dell, Friedman, and Marquez 1999). The impact of the switching cost in mapping the relationship with customer satisfaction varies as per the nature of the industry. However, (Jones, Mothersbaugh, and Beatty 2002) claimed, in the banking industry the influence of the switching cost is associated with the pre-switching cost, evaluation cost and the setup cost is negligible as the consequence of the standardized banking system. The strategy implied from the switching cost to lock the customers in the relationship of service sector including the banking industry is challenged by the online platform (Matthews 2014) (Vatanasombut et al. 2008). Though the purpose of the bank in introducing online platform is to address the technical demand of dynamic competitive environment, to elevate the banking service, the unavoidable features of online platform diminishing the strength of switching cost appeared which are as following:

In online banking **minimal** cost associated with the exploration of alternative valuation is the factor which makes covers the scope of low searching cost.

**Flexibility** in the entry barrier of banking sector denotes the low or the minimal capital investment incurred in terms of the account opening. Most of the banks of Nepal do not charge extra from the customer for opening an online banking account (Vatanasombut et al. 2008). However, there is a certain yearly payment, which will not create any barrier in terms of customer flexibility. Eradicating the uniqueness of banks indicates the minimizes the brand relationship loss cost accessing the lower customer retention (Vatanasombut et al. 2008). The conceptual traditional connection of the service quality dimensions, switching cost and customer satisfaction can be found in the literature ref. However, the impact of switching cost in the relationship of the variables varies as the nature of the industry and the scope.

## **3.0 Conceptual Model and Hypothesis**

The chapter two discussed earlier is the baseline of this chapter. The theoretical literature of the logistics service alienated as operational logistics service and the relational logistics service is further conceptualized into major four e-quality dimensions to examine its impact on the customer satisfaction. The inspection carried in the form of hypothesis is intended to determine the relationship between the service quality dimension and customer satisfaction in Nepalese online banking context.

### **3.1 Conceptual Model**

In this study, conceptual model is developed to explore the relationship between the service quality dimensions and the customer satisfaction in the light of the switching cost. Based on the theoretical review presented in the chapter two one dependent variable, two independent variables and two control variables is presented for the relational analysis. Here, two independent variables, website attribute (Web), privacy, and security (PAS) of online banking are the influencing factors of dependent variable customer satisfaction (CS). The interaction effect in the model is developed to overview the impact of the switching cost in the association between the dependent and the independent variable. The duration of relationship that the customer has with the bank in overall including the retail banking and the relationship with the bank in the context of online banking are also taken into consideration as control variables.

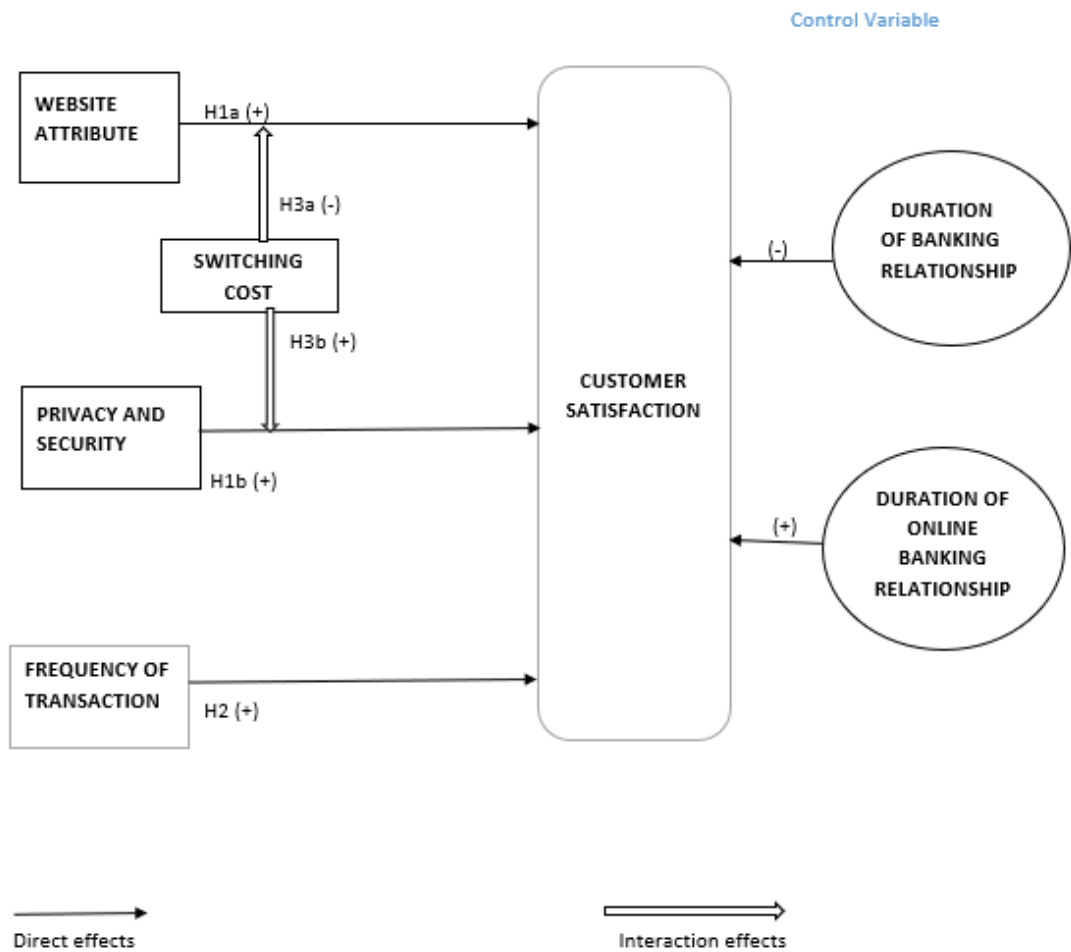


Figure 3.1: Conceptual research model for the investigation of customer satisfaction

## 3.2 Research Hypothesis

The research hypothesis of this study was developed based on literature of customer relationship management in which the theoretical aspects of the service quality dimensions and the customer satisfactions were the variables for the research.

### 3.2.1 Relationship between service quality and the customer satisfaction

There is a great deal of information being published and discussed regarding service quality and customer satisfaction. The direct impact made by the service quality in the articulating

satisfaction of the customer and the importance of the satisfaction for the long-term sustainability of the business makes this area of fascinating (Dabholkar and Bagozzi 2002).

Customer satisfaction is the post-purchase analysis in the form of contentment achieved using the product or the service with respect to the expectations set prior (Cengiz 2010) Service quality is the opinion created regarding the totality of the association of the offering. The service existed in these definitions illustrates the association of the customer service and the customer satisfaction. There is various opinion regarding the service quality and the customer satisfaction. However, most of the research circulates in the focal aspect of the retail outlay(Sivadas and Baker-Prewitt 2000).

As per the interpretation of (Siddiqi 2011) of regarding the service quality and the customer satisfaction, these are the diverse concept from the viewpoint of marketing.

In the literature of service quality and the customer satisfaction there has been conflicting findings made by the researcher regarding the origin of these factors (Siddiqi 2011). The conceptual verdict forwarded by (Bitner 1990, Bolton and Drew 1991) stands on the base that customer satisfaction is the driving factor of the service quality which was backed by the clarification given by (Beerli, Martin, and Quintana 2004). However, the recent research carried on this aspect states that service quality is that customer satisfaction is based on the quality of the service (Kumar, Tat Kee, and Taap Manshor 2009, Bedi 2010). Regardless, all these researchers agreed that positive association of the customer satisfaction and the service quality in banking sector.

The analogous finding on the positive association between the service quality and the customer satisfaction of the service can be seen in the literature (Taylor and Baker 1994), (Levesque and McDougall 1996), (Meuter et al. 2000), (Al-Hawari and Ward 2006) (Amoah-Mensah 2016). Whereas, some minor differences can be found in the conceptual association of customer satisfaction and the service quality in case of the availability of other variables.

In this study, two dimensions of the service quality is included for the examination of the association between the service quality and the customer satisfaction. The initial dimension of service quality is Website attribute and the latter is Privacy and the security of online banking.

Website attribute and its influence on customer satisfaction:

Website Attribute:

Website attribute is the totality of the web appearance reflecting the attractiveness and the interactivity of website premeditated for the provision of the help facility to enhance the customer's experience in the online platform with the offering of strong economic value (George and Kumar 2014). In the online platform, website is the key point of contact of the service provider and the customer where the ongoing challenge is to pinpointing specific factor of website quality to determine its success of the website.

The quality of a website is determined from its playfulness and perceived flow, which possesses the strength to influence the customer satisfaction (Hsu, Chang, and Chen 2012). The research paper which claims to be initial one states the significance of the website attribute in the constructing the e- satisfaction (Szymanski and Hise 2000). The significance of the website attribute as a direct influencer of customer satisfaction has been the findings of the literature (Bai, Law, and Wen 2008), (Chen and Cheng 2009). Perceived playfulness is the strength of the website attribute, which reflects the customer's insight of expectation being completely overlapped by the satisfaction. Similarly, perceived flow is the unique feature of the website attribute indicating the flow of interaction in an online environment, which can raise buyer's satisfaction by mitigating the cost concern of the customer (Hsu, Chang, and Chen 2012). (Kassim and Asiah Abdullah 2010) claimed there is positive relationship between the website quality and the customer satisfaction where the major features of the website attributes articulated in the form of the easy to use, website design and the customization were the base of the findings.

Privacy and security:

Privacy is the important service quality dimension, which is concerned about the protection of the information with highest care, where an individual, cluster or the organizations define the degree of transmissible information on their own. It is more than just the determinant of the service quality. It is the major factor, which plays a significant role in shaping the decision of the users in adopting the internet banking (Lichtenstein and Williamson 2006) These factors that come into consideration regarding the privacy and security of online banking which is mainly focused on maintaining the confidentiality. In Nepal, it has not been more than the decade that the banking industry has introduced the online banking where the banking is still in the infancy stage trying to win the trust factor of the customer in inspiring them to use the online banking. It was addressed as the most important service quality dimensions in the internet banking (Gupta and Bansal 2012).

Most of the researcher use this factor a unidimensional whereas some address these as two individual dimensions of the online banking. However, the focus of PAS in the means of maintaining privacy of information. There have been lots of research done on the PAS dimension of service quality in the context of online banking. The role of PAS quality dimension is significant in any sort of relation.

Hence, form the above argument regarding the service quality dimension of online banking following hypothesis may be formed.

H1. There is positive association between the service quality and the customer satisfaction in online banking.

H1b. There is positive association between privacy & security and the customer satisfaction in online banking.

H2. There is positive association between the frequency of the transaction and the customer satisfaction in online banking.

Frequency of the transaction is one of the independent variables of this study, which indicates the number of times customers visit for online banking site for the banking transactions. The use of online banking more often indicates the comfortability as the time saving done in accumulated form online bankers. This which is extracted from the literature of relationship management. The more customers of online banking use the service the more they will be familiar with the possibilities of virtual banking positively. This concept forwards the positive association between the service quality dimension and the customer satisfaction.

### **3.2.2 Relationship between logistics service quality, switching cost and the customer satisfaction**

Service quality and customer satisfaction have dominated the study of service marketing. However, studies carried for the relationship investigation of the service quality dimension and customer satisfaction in the light of the switching cost based on the online platform still

has more to explore. Many researchers have used the customer's satisfaction as a mediating variable to determine customer loyalty (Caruana 2002, Fornell et al. 1996, Bowen and Chen 2001) While many used it in connection with the service quality without the switching cost (Jun and Cai 2001).

Here, customer satisfaction is the only available dependent in our studies where switching cost is the interacting variable and the dimension of the service quality are website attribute and the privacy and security. The introduction of the switching cost in the conceptual understanding of interrelationship focuses the interacting effect of the switching cost itself with the customer satisfaction and claims the negative association between them (Matzler et al. 2015, Yang and Peterson 2004, Gütlich, Hauser, and Spiering 1994). In wide-ranging understanding, these variables: customer satisfaction and the switching cost signifies the inverse relationship between them (Yang and Peterson 2004, Zhang, Cheung, and Lee 2012) argues that impact of the switching cost is only significant when the customer's satisfaction value exceeds the average level of satisfaction and further states switching cost minimizes the customer satisfaction with the reference of (Gütlich, Hauser, and Spiering 1994).

This study incorporates the switching cost as an interacting variable in testing the relationship between the website attribute and customer satisfaction. From the literature of service quality, switching cost can be assumed to have a positive relationship. i.e. higher the level of service quality higher will be the switching cost for the online banking users. However, the author is trying to investigate each component in detail as it is the only way to gain the profundity of the conceptual analysis. Hence, each service quality dimension is accessed individually.

Switching cost:

The interpretation of the interacting effect is possible only after having an idea about the antecedent of this variable. Here, in the case of switching cost there are two antecedents; a relationship which covers the duration of involvement in business relationships and the next one customer characteristic (Chiao, Chiu, and Guan 2008).

Website attribute and switching cost:

The foundation of the evaluation of the website attribute is ease of use, attractiveness and the usability of the website in the context of online platform (San Lim et al. 2016). Here, these of web is taken into consideration to track the interaction effect.

1. If ease of use of the banking website is enhanced by the bank then this will have a negative effect in switching cost as the learning cost, post switching behaviour, set up cost and the evaluation cost will be lower (Jones, Mothersbaugh, and Beatty 2002).
2. The focus made on the attractiveness of the banking website can possibly have a negative impact on the association with customer satisfaction as a banking website is a more informative and sensitive nature. The positive impact of website attribute gained through another platform of an exciting website like the online tourist destination tenets to give (Mills 2002) can be contrasting.
3. The usability of the website may again possibly reduce the satisfaction gained from the web attribute. This is simply because the banking usage in Nepal is limited with the range of six dimensions of usability as mentioned in chapter 1.

Therefore, upgrading the web attribute can possibly have a negative impact on its association with customer satisfaction when the switching cost is presented in the form of interacting variable.

Hence, based on the arguments mentioned above, following hypothesis regarding the interaction effect can be estimated as:

### **Hypothesis 3:**

The association between the web attribute and customer satisfaction become less positive when switching cost is introduced.

### **Privacy and security (PAS)**

PAS is more than a dimension of service quality. It is one of the crucial factors of online banking which is the baseline for the banking users in adopting online banking. PAS is a quality dimension in which the service provider can influence online banking. The critical components of PAS for the assessment of its impact are confidentiality bank maintains and the creditability of the bank (Casaló, Flavián, and Guinalú 2007). The increment in the PAS can increase the SC as banking user perceive PAS importantly as something which is beyond the reach of customers. Here, switching cost is the interacting variable making a great impact in the existing association between the PAS; quality dimension and the customer satisfaction of the online banking.

Hence, based on the arguments mentioned above, following hypothesis regarding the interaction effect can be estimated as:



**Hypothesis 3b.**

The association between PAS and customer satisfaction is significantly decreased with the increase of switching cost.

**3.3 Control Variable**

In this study, the main objective is to determine the relationship between the service qualities, customers satisfaction in the light of the switching cost. One type of the variable, which is used in this multiple regression analysis apart commencing the main effect, is the control effect. The control variables of this study are the duration of relationship with the bank which starts form the retail banking (D1). The next variable is the duration of the online banking relationship (D2) which represents the situational factor of this study which is further explained in detail.

Duration of existing relationship (D1):

D1 in this model represents the total amount of years that the customer has been in the relationship with the bank. This relation duration covers the years invested by the customer as the user of the banking services form the beginning of opening account in that specify bank.

D2: This relational duration covers the time from which the customer starts using online banking services. Usually, customer open the account in the retail baking which is followed by the inaugural of the online banking.

## 4.0 Research Methodology

This chapter will present the overall research methodology applied in this research paper in a chronological mode. It gives the general framework of the research procedure, applied data collection methods, population of interest, sampling procedure along with the sampling size.

### 4.1 Research paradigm:

A research paradigm is the established belief in the identification and the understanding of the problem in a scientific way with the systematic investigation Burns (Burns 1994, Mackenzie and Knipe 2006). It is the initial step assists in determining the decision on the choice of research design with respect to the approach, strategy, method time horizon and the data collection (Kuhn 1981, Saunders, Lewis, and Thornhill 2009). There are four types of research paradigms known as a positivist paradigm, transformative paradigm, pragmatic paradigm, and interpretive paradigm (Creswell 1996, Mackenzie and Knipe 2006). The progressive research literature influenced by dramatically increasing research method has added the information in interpretive philosophy. However, the real purpose of this philosophy is an effort for a better understanding of the human world with the belief of the study that reality is socially constructed; this made the researcher to choose this philosophy for this research (Creswell 2003, Creswell 2014)

The other three philosophy seems less relevant for this research based on the feature they own. Positivist paradigm is based on the philosophy where the impact of consequences is determined in the form the cause get law- like generalization (Brent 2000, Remenyi et al. 1998)Simply, it forwards the idea that the social world can be configured in the experimental manner same as the natural world (Creswell 1996). Transformative paradigm recommends including politics and political agenda along with other agenda, which possess the potential to make an impact about the research(Watkins and Cooperrider 2000, Mertens 2007, 2010). On the other hand, pragmatic paradigm highlights on the “what” and “how” of the research problem where information claims are extracted out of action, situation and the consequences (Mackenzie and Knipe 2006, Fishman 1991, Wille 1999, Rorty 1993).

Whereas, the objective of the research is to understands the scenario of the subject where individuals in the group contributes in creating the reality. In this regard, there is no single reality, the information needs to be further interpretation by detail understanding of

dimensions of each factor, events, and activities. Therefore, this research comes under the interpretive paradigm (Creswell 2003, Mackenzie and Knipe 2006).

## 4.2 Research Approach:

There are two types of approaches based on which the research can be carried further. One of them is inductive approach and the next one is deductive approach (Saunders, Lewis, and Thornhill 2009)

**Deductive approach:** This format of this approach is to develop a hypothesis and finally verifying the hypothesis based on the existed theories. Here, the degree about the clarity of theory starts from the initial phase of the research (Saunders, Lewis, and Thornhill 2009).

**Inductive approach:** Inductive approach of methodology starts with the collection of the raw data for extracting the information regarding field. Then the information relates to the rest of the aspects of the research such as objectives and the findings to develop the real framework of the research (Thomas 2006)

## 4.3 Research Strategies:

The research questions and the objectives are the baselines for the research strategy, which should consider the crucial factors such as the availability of the resources and time, the scope of the literature, and the philosophical under prints for the selection of specific strategy over the remaining (Saunders, Lewis, and Thornhill 2009). There are seven most recognized strategies based on which researchers can further process for the data collection, which are known as:

- Archival research: This strategy is implied for the research made on the past in which the researchers use the recorded information as the main source of findings. Then focus of implying this strategy is to figure out the changes in specific subject (Saunders, Lewis, and Thornhill 2009).
- Action: This form of research was introduced by Lewis in 1946 in which four themes of the literature was presented starting from the focus given to the research in action to connection of the practitioners in the research to the iterative process carried in the research leading to the unique theme stating that the research discoveries could relate to the other circumstances (Saunders, Lewis, and Thornhill 2009).

- **Ethnography:** This is deep-rooted time-consuming strategy of the research, which is justified by the approach of the researcher where one must immerse completely in the scenario where the research is subjected (Saunders, Lewis, and Thornhill 2009).
- **Grounded theory:** The main theme of this of this strategy is that is theoretically grounded in the data extracted from the only base known is social research, which is the real field of study (Goulding 2002).
- **Experiment:** This form of research is popular especially in business and management such as organizational psychology, where the focus lies in identifying the link between the two variables to address “how” and “why” research questions (Saunders (Saunders, Lewis, and Thornhill 2009).
- **Survey:**  
It is the mining of the information from the certain portion of the population, which mostly tends to be associated with the deductive approach (Saunders, Lewis, and Thornhill 2009).
- **Case study:**  
Case study is an experimental investigation subjected in the real-world setting, designed for the depth understanding of the subject in the scenario when the limitation of phenomenon and the context is unclear (Saunders, Lewis, and Thornhill 2009).

#### **Sampling Frame:**

In the case of sampling selection procedure, there is a certain group of individuals possessing the changes of being a part of sampling. The only selected list of containing sampling units included for the sampling is designed sampling frame (Fowler 2009).

#### **4.4 Research Design:**

Research design is the methodical master plan, leading the research in a scientific approach for specific direction within qualitative, quantitative and mixed method approach (Creswell 1996). There is tremendous literature overview regarding the research design with the contribution of the many researchers presenting the depth knowledge. Therefore, the variances in the classification of research design is as expected (Malhotra and Birks 2007).

However, the content of this chapter will be based on the (Saunders, Lewis, and Thornhill 2009) which has classified the research design in three segments based on their purpose.

Exploratory research is concerned with the further clarification of the understanding on specific problem with the possibility of acquiring new insights of the topic. Descriptive research, as the name suggest, its purpose is to gain the detail understanding for portraying the exact profile of the specific person, place or the situation or the relationship between the variables. Explanatory studies are carried to stablish the casual relation between the variables of the research.

This research is explanatory research as the objective of this research is to formulate and test hypotheses to clarify the relationship between the variables. The time invested in this research for the primary data collection is ten days. This research is carried within a continuous single period, so it is the cross-sectional research based on retro capitalized in this research. This study follows a mixed approach under cross-sectional which assimilates both quantitative as well as the qualitative approach of relationship.

#### **4.5 Questionnaire Development:**

According to (Fowler 2009) the answers itself is not competent enough to make research fascinating. In fact, it is the set of answers reflecting its relationship with the core of research and other dependent components, which makes the answers of the survey meaningful. Therefore, all the questions in this research is designed taking LSQ as a base of the research. Whereas, remaining crucial components of investigation such as customer relationship management presented in the form of the customer satisfaction and the customer loyalty are also taken into consideration to examine their relationship. All the question related to the CRM were based on the priority given by the researches of that field such as (Tang, Shee, and Tang 2001, Kenneth H Wathne and Heide 2000)

As an effort of contributing the literature, one of the significant aspects of the online banking known as the customer acceptance to the technology is also included in the questionnaire to figure out its influence on the rest of the variables. Finally, the dimensions of switching cost which can influence the customers paying behaviour for the online service is also included in the questionnaire for understanding its impression on online banking. The situational, as well as the social aspects playing the part as the controlling and the influencing factors, were also included in the questionnaire for the extracting the depth understanding.

The restructurings of the questionnaire with the help of the supervisor was followed by the sample distribution of the questionnaire to 15 customers for the pre-test. The test approach was proceeded to boost the confident of research to ensure that the customers understood all questionnaire, which is critical part of survey (Fowler 2009). The final version of the questionnaire used for the survey embraces the recommendation made by the testing customers.

The original English version questionnaire were translated into Nepalese language for the convenience of the customers and to amplify the coverage of the survey from the possible language barrier. Here, in the survey all the four levels of the measurement were included starting from the nominal, ordinal ratio to the interval data. The interval data was constructed in the form of seven category scale with 1= strongly disagree to 7= “strongly agree”. Furthermore, the questionnaire was divided into four phases. The survey starts with the important closed ended question regarding the existence of internet banking account. The second part of question is all about the personal details indicating the demographical and the social aspects. The last category of the questionnaire contains the crucial components of the survey starting from the website attribute dimensions of logistics e-service quality to the switching cost questionnaire.

#### **4.5.1 Location:**

This research is carried in the capital city of Nepal known as Kathmandu. The purpose of choosing Kathmandu as a research location is that it is the city, which occupies half of the online users of Nepal (Khatri and Upadhyaya-Dhungel 2013). Kathmandu is the best option to get the approximate understanding of online logistics service quality impact on customer’s behavioural intention in the context of Nepal.

#### **4.5.2 Data Source:**

This research is based on the pragmatic approach, which combines primary and the secondary data for the understanding of the research aspect, establishing the hypothesis and to understand the outcome of the research (Onwuegbuzie and Leech 2005). There are three different strategies used for the collection of the primary data in the form of observation, the interview and the questionnaire (Befring 2004). Here, primary data comes into role as researcher conducted the survey with the help of the questionnaire to collect information.

The main source of the primary data used in this research is the data accumulated through the survey from the five organizations

#### **4.5.2.1 Bank A:**

This is one of the most recognized government bank of the Nepal. The remarkable assistance done by the government bank by circulating the questionnaire to 150 of its active online banking users.

#### **4.5.2.2 Bank B:**

This is one of the trustworthy banks, which has been in operating since last 50 years. This bank helped in circulating the questionnaire through the mail for 100 of its active online banking users.

#### **4.5.2.3 Internet service company C:**

This is one of the schools of Kathmandu in which the salary settlement is done through the bank. In this regard it has a high chance of the teachers are the employee of the school to use the online banking. As per the information obtained from the school administration, the questionnaire was circulated to the 50 of the teachers.

#### **4.5.2.4 MBA College D:**

This is one of the popular colleges located the heart of the Kathmandu known as the Baneshwor. The questionnaire of the research was distributed to the students of MBA.

The secondary data has also been used in this research. It has assisted the researcher to guide to create the outlining the theoretical perspective in the literature review part. Those secondary data abstracted from the research papers, journals and the official website of the various banks of the Nepal has been the base for the creation of variables and the hypothesis in this research.

## 4.6 Data Collection:

Data collection is the one of the important parts of the research. It is a process composed of a circle of the interconnected activities carried for the data collection starting from the location site to gaining access and making rapport to purposefully sampling to data collection to recording information to the resolving field issues to the data storing (Creswell).

There are several methods of data collections such as telephone, the internet, mail, personal interview (Fowler 2009). Researcher used survey research method with internet to accumulate the data with the set of questionnaires. In this survey, the questionnaire was circulated in the form of google sheet through mail. The researcher had video chat with the five companies named as A government bank, B non-government bank, C internet service company, D college and E university. The process of online data collection continued for 2 weeks in which the follow up approach was made in between.

### 4.6.1 Population

*“Population is the totality of the cases that conform to some designed specifications”* (Vanhoy et al. 2004). The population in this study consists of the customers of online banking users. The questionnaire is circulated through the two banks of the Nepal among which one is government bank and the next one is non- government bank. In addition, questionnaire is distributed through rest of three organizations to reach online banking customers.

#### **Sampling Frame:**

A good survey design is composed of three essential methodologies of the sample survey presented in the form of the sampling, designing questions, and the data collection (Svensson 2002). The sampling design consist of five sequential steps starting from defining the population in questions, selecting the sampling frame, selecting the sampling procedures, choosing the sample size and finally selection of the sample elements (Kothari 2004).

According to (Fowler 2009) the three features of the sample frame is an important factor, which a researcher should consider. The initial one is comprehensiveness, which is concerned about it is the exposure to cover the targeted population. The next characteristics is efficiency of the sampling frame in terms of its approachability of the desired population. The third feature is all about the measurability of whether of a person’s likelihood of being selected.



The establishment of the sampling frame guides the researcher to the further process which is known as the deciding the sampling method. There are two types of the sampling approaches known as the probability sampling and the non-probability sampling.

This discussion of the sampling procedure follows the guideline given by (Fink 2003).

#### **4.6.2 Probability sampling:**

It is considered as the representative of the research or the targeted population. It is known as the random sampling where each participant of the marked population has the nonzero possibility of being included in sample (Churchill, Brown, and Suter 2001, Fink 2003). The probability sampling is further divided into four categories:

##### **Simple random sampling:**

In this sampling, each member possesses only one chance of being selected independently for the sampling. This sampling technique assist in extracting unbiased data with technical difficulty is minimal (Fink 2003).

##### **Systematic sampling:**

This sampling starts with the listing of eligible participants in a structured manner such as numerical or the alphabetical, which is followed by the random selection of specific candidate. All the remaining participants of the sampling frame is selected in fixed intervals based on the initial randomly selected candidate (Fink 2003).

##### **Stratified random sampling:**

In this sampling, the total population of the survey is divided into subgroup, which is followed by the random selection from the subgroup for the formation of the sampling (Fink 2003).

##### **Cluster sampling:**

In this sampling cluster is the crucial point of designing the sampling, which is known as the naturally reoccurring unit. Then all the members of the cluster is included in the sampling (Fink 2003).

##### **Non-probability sampling:**

It is selective sampling where each eligible unit possess different chances of being included in the sampling. It is comparatively convenient as each component of the sampling is designed based on purpose and judgement (Fink 2003, Kothari 2004). It is classified into three categories known as the convenience sampling, snowball sampling and the quota sapling.

**Convenience sampling:**

This sampling approach follows the convenience of the data collection for survey where the availability and the willingness of the participants assists in designing the sampling for the research (Fink 2003).

**Quota sampling:**

In this approach, the division of the population into subgroup is followed by the estimation of the percentage of each participant in the subgroup for designing the sample (Fink 2003).

**Snowball sampling:**

This approach is carried for the sampling of the survey where the structured list of the eligible participants is missing. In such case, the existing list is followed for identifying the possible new participants for the survey (Fink 2003).

Thus, the sample frame in this study consist of registered online banking users of Nepal. The fountainhead of the data is two banks, which is supported by the leading cablenet provider and MBA college of Kathmandu. The government as well as the non-government bank has the online banking users of approximately 1%. Whereas, total customer of non-government bank is approximately 550000 and the government bank is around 250000. Therefore, in the context of data extraction from the bank, this research employed a simple stratified random sampling. In addition, quota-sampling approach is applied for the data collection from the remaining source presented in the form of college and the cablenet provider company bounded by the inclusion criteria.

## 4.7 Sample size

This issue one of the most common part of research design, which possess the power to influence the investigation of variables in determining their connection and significant differences (Kotrlík and Higgins 2001). The general rule of thumb states the requirement of minimum of 50 participants for the correlation or regression analysis is most as a sample size for a survey. According to (Kotrlík and Higgins 2001) execution of the factor, analysis in the research binds the researcher with the minimum sample size of 100, which is implied in this survey. It also suggested that  $N \geq 50 + 8$  (where m indicates the number of independent variables) for the multiple correlation and  $N \geq 104 + m$  for the partial correlation for determining the size of the sample (Kotrlík and Higgins 2001, VanVoorhis and Morgan 2007).

There are various literature stating different opinion regarding the sample size of the survey. Central limit theorem suggests in accumulating the higher size of the sample as far as possible to strengthen the discovery of the survey (Saunders, Lewis, and Thornhill 2009). Whereas, Researchers such as (Fink 2003, Fowler 2009) advocates factors to be considered in determining the sample size rather than concentrating in maximizing the sample size. (Fowler 2009) highlights the importance of avoiding three basic misconstruction regarding survey such as making the real population size the base of the size, follow up standard survey studies and the third one is inclusive of margin of error. In support (Fink 2003) suggests in synchronizing the maximum coverage of the sample with the minimizing the error which might occur because of diverting attention (Fink 2003). Hence, this research design covers 136-sample size by addressing all the related issues of sampling size.

#### **Questionnaire Administration and Response Rate:**

The main google form for the survey was mailed to these three organizations. Then, the associated authorities of related organization circulated the form to their respective customers and the staffs. There is no record of specific no of forms distributed to the customers. Overall, data used for this study is accumulated from 150 online banking users out of which 134 respondents fill out the form completely, whereas remain 16 respondents could not proceed further as they were not the customers of online banking.

## **5.0 DEFINATION AND OPERATION OF VARIABLES**

This chapter discusses the operationalization and the measurement of variables used in this research.

### **5.1 Operationalization of Latent variables:**

Latent variables signify the purest form of the one-dimensional fundamental notion that cannot be measured in a straight line as it is not possible to observe them directly (Bollen 1989, Fayers and Hand 2002, Byrne 2013). It is none any other than latent variables which forward the hypothetical variables to corresponds the concept (Bollen 1989), hence introducing the operationalization of latent variables comes into consideration to quantify latent variables (Byrne 2013). The contribution of operationalization in providing clear and scientific measurement gives meaning to the variables (Slife, Wright, and Yanchar 2016).

### **5.2 Measurement Model:**

It is the systematic approach of creating a connection between the concept of the latent variables and observed variables. Here, the latent variables are the baseline of research and the observed variables are the foundation of the findings (Bollen 1989). The prerequisite of the measurement process is concept, which must consider the reality check for outlining the whole research to avoid the functioning in the wrong data (Bollen 1989). The four steps of the measurement models follow the formation **of the concept**. The initial step is to give the meaning of the concept which is chronologically tracked by recognizing the dimensions and the latent variables to denote it, forming measures and finally stipulating the association between the procedures and the latent (Bollen 1989). There are two measurement models, which is distinguished based on the cause and the effect relation constrains possess with the factors of the latent variables (Wang, Tang, and Tang 2001), Jessup, and Clay 2015).

#### **5.2.1 Principal Factor Model:**

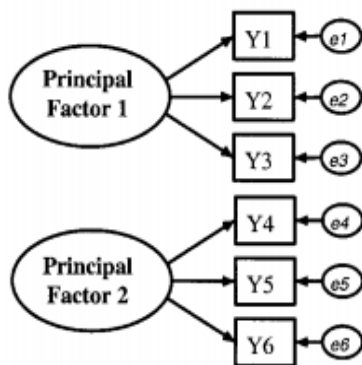
In this model, the directions of causality are centralized to the factor mutually as it is the base of the underlying latent construct. This implies a high degree of connections between the indicators where the alteration of the indication cannot modify the meaning of the construct. The impact of the error is fascinating in this model as it guides the researcher to be selective for the election the best representative of the construct based on the reliability of individual indicator (Mackenzie et al. 2005, Wang, Jessup, and Clay 2015). In this regard,

the reliability test can be carried with the help Cronbach's Alpha, which is the well-established method of measuring the internal consistency of the variables, presented in terms of the indicator of the factor.

### 5.2.2 Composite Factor Model:

In this model, the indicator contributes collectively to defining the composite latent factor where the direction of the connection is extended to each indicator from the main factor. The collective approach of integrating the indicator is the baseline of designing the measure. Hence, elimination along with the addition indicator can make a significant impact in the specification of the factor. In contrast to the reflective model, higher correlation between the indicators can lead to the problematic sequence, as the potential of the indicator tends to minimize in uniquely identifying the measure (Mackenzie et al. 2005, Wang, Jessup, and Clay 2015). The examination of the validity of the formative model is comparatively complicated than the reflective model. However, (Diamantopoulos and Winklhofer 2001) managed to outline the convincing approach to validate the formative model by including some of the related reflective indicators to formulate multiple indicators and the multiple causes.

Principal Factor Model



Composite Factor Model

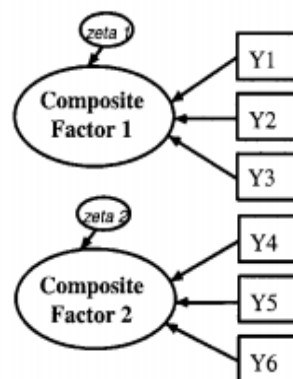


Figure 5.1 Measurement Model

### **5.3 Measurement process:**

This section contains a brief overview of the latent variables used by the researcher in this study with the observed variables used for the study. Here, service quality is the baseline of the research, which has formulated the major two dimensions as an independent variable; website attributes (Web), the privacy, and the security (PAS). Whereas one dependent variable is extracted, from the literature in the form of customer relationship management in the form of customer satisfaction. In addition, the relational factors indicating the controlling variables are also included to examine its impact on the customer's opinion. The control variable used in the research is duration of banking relationship (D1) and the duration of online banking relationship (D2). Finally, the switching cost is also included in this research as an influencing variable.

#### **5.3.1 The Dependent Variable**

Customer satisfaction (CS)

In this study, customer satisfaction is the only available dependent variable, which is articulated based on two independent variables. The initial phase of accumulation of five items from the literature is further processed and designed the final questionnaire influenced by related market present scenario. The questionnaire was modelled using a 7-point Likert scale ranging from 1=strongly disagree to 7=strongly agree(Fornell et al. 1996, Yoon 2010).

CS1: Overall, I am very satisfied with the services offered by internet banking platform.

CS2: I am completely satisfied with the online platform service charges/ price

CS3: Time saving in transaction really boost the online banking services of my bank

CS4: My bank comes up to my belief of a great online banking service provider.

CS5: Overall, I have a very positive impression towards online banking.

#### **5.3.2 The independent Variables**

**Website attribute (San Lim et al. 2016, Pee, Jiang, and Klein 2018)**

This latent construct measures crucial aspects of the website attributes of online banking such as flexibility, online banking possibilities, attractiveness, user-friendliness and the content. 7- point Likert scale from strongly disagree to strongly agree is used for the

measurement of website attribute. The questionnaire is constructed referring to the literature of

Web1: The website of my bank gives me more flexibility

Web2: The websites of my bank contain almost every possible banking facility.

Web3: The website design of my bank is extremely attractive

Web4: The website of my bank is very user-friendly.

Web5; The content of my banking website is very well organized.

### **Privacy and Security(Casaló, Flavián, and Guinalú 2007, Nepal, Sherchan, and Paris 2011)**

The independent variable privacy and the security of online banking are composed of five items including the customer opinion on online banking safety, personal information protection, confidentiality of the financial information. The items are measured by the 7-point Likert scale starting from the strongly disagree to strongly agree derived from the previous research and literature

PAS1: I always feel safe when using my online banking for fund transfer to other accounts.

PAS2: My personal information mentioned in online banking is completely protected by my bank.

PAS3: The financial information of my online banking is always free from being misused.

PAS4: My dealing in online banking has very high confidentiality.

PAS5. The website of my bank strongly boosts my confidence in online banking.

### **Switching Cost**

In this study, switching cost is used as the interacting variable to examine the impact of the relationship between the variables for the depth understating of the variables consideration the situational factor. Six curtail dimensions of the switching cost are presented in terms of the measurement items modelled in 7-scale Likert scale. This variable is composed of the factors; learning cost; action cost; uncertainty costs; search and evaluation cost and brand relationship loss cost. The scale of switching cost is constructed from the previous work by

### **Duration of banking relation**

Duration of banking relationship (D1) denotes the overall period for which the customer has been the customer of specific bank. Obviously, as per the normal procedure banking account in retail baking comes first into consideration in binding association with the bank. So, this duration is taken into consideration by referring to investigate its impact on the variables. A

Single item in the form of the duration of time you have been using this bank is set as the question for understanding this variable (Nui Polatoglu and Ekin 2001).

### **Duration of online banking**

Duration of online banking relationship (D2) is the next control variable used in this study which is composed of single question Duration of time you have been using online banking in this bank. This construct is measured by a single open question which is adopted from the literature such as (Nui Polatoglu and Ekin 2001).



## **6.0 Measurements Assessment and Data Validation:**

This chapter deals with the ensuring the credibility of quality of the data accumulated for the research. It presents the assessment of the data quality in the form of descriptive analysis, regression analysis, normality check and the multi collinearity check of the data used for the study.

### **6.1 Data screening and cleaning**

The concern of each researcher is to produce most accurate, credible and replaceable finding, which is almost impossible without data assessment before performing the analysis. Data screening is the process which assists in detecting real and the possible faults in the data entry before proceeding for the data analysis (O'Rourke 2000). There are various techniques for the data screening and cleaning in which the simplest one is low tech which involves the visual scanning of the data. In this study, the researcher has preferred the high-tech approach of the data screening known as SPSS as the online google sheet was distributed there was minimal possibility of the data entry error (O'Rourke 2000). According to (Pallant 2013) data screening is composed of two important steps in which initial one is the examination for the error which follows the vital step of finding the blunder in the data file the next one is amending. He also mentioned that initial investigation could be carried through descriptive statistics such as minimum, maximum, mean and the standard deviation of the accumulated data. In addition, the second phase of screening can be supported by sorting the data in chronological order such as ascending or the descending (Pallant 2013).

#### **6.1.1 Assessment of Missing Data:**

As the name suggests missing data are the unexploited values of the research, which may lead to the influenced and the forfeiture of the information. This can be the potential pitfalls for the gap of the real situation and the extracted results of the study (Ware et al. 2012). It is almost impossible to find complete data for the research, especially when the subject of research is human. Therefore, the focal point should be identifying the nature of missing data to address them accordingly to minimize the biases in the findings (Sterne et al. 2009, Pallant 2013). According to (Sterne et al. 2009) there are three types of missing data such as missing completely at random, missing at random and missing not at random. The initial two sorts of missing data can lead to prejudice in the findings. Such negative impact can be

diminished by multiple imputations, which is the mechanisms of structuring the model to cover up the missing gap of specific variables by the researcher (Sterne et al. 2009 (Sterne et al. 2009), (Pallant 2013). Missing not at random is comparatively harsher to identify but its impact can be reduced solitary by sensitivity analysis checking the effect of various assumptions regarding the missing data mechanism (Sterne et al. 2009). In this research missing values were not found in the data sheet as the questionnaire was designed in the google sheet by making each answer tab of the questionnaire mandatory. This feature of the questionnaire made the online customer fill out each answer to proceed further and complete the google sheet to be included in the research.

This form was circulated through four major organizations. The total number of 150 responded for the online form where 134 completed the form till the end are the real responded. 16 people could not proceed further as they were not the users of the online banking.

### **6.1.2 Assessment of Outliers: (Normality)**

The extreme values existing in the form of exceptionally large or small within an observation, which deviates significantly from the normal values of the observation is an outlier (Hair et al. 1998)book . There are two sorts of the outliers known as univariate outlier; where the presence of the extreme value can be found in a variable whereas the next one is the multivariate outlier where the unusual value is seen in the combination of the values of two or more variables (Tabachnick, Fidell, and Ullman 2007). The focal point of the outlier known as extreme value do dot has specific definition. However, as per the rule of thumb which scores more than the three-standard deviation beyond the mean is considered as the outlier (Kline 2011).

As per the (McClave et al. 2014) there causes of the outlier which are; procedural error which occurs in the initial phase of data entry in the system; coverage error which appears in case of the data comes from the dissimilar population and event error, which is the case of data assessment of the sporadic occurrence.

There is various method to track the outlier in the data such a boxplot and z score. In this study, author has used the criteria of z score 3.3 as a cutoff point suggested by the

(Tabachnick, Fidell, and Ullman 2007) to detect the outlier. In this study, the outlier detection is carried out considering the values extracted from the SPSS with the help of linear regression. Initially one of the value falls in the range of the outlier which was removed from the data set. This result into the data set falling from 1.85 to -2.90 which fulfils the criteria set by the (Kline 2011)

### **6.1.3 Skewness and Kurtosis for Normality Check:**

There are various tests for the normality, among them skewness and the Kurtosis are the most frequently used statistical tool. Skewness1 (Pallant 2013) outlined the concept of the normal as a the symmetrical bell shaped curve with the slighter occurrences of the scores in the initial and the ending part of the cure whereas the frequency of scores are presented in the higher level in the middle (Pallant and Manual 2007). It assists to ensure the normality of the distribution by assessing the coverage of the observation are congregated around the central mean. Whereas, Kurtosis assists is assessing the Preakness of the distribution.

In the case of normality in the data, both skewness and Kurtosis values are equal to zero. Whereas, the positive skewness indicates that large number of cases are loaded in the left tail of the curve excessively with the inverse situation in the left tail. The positive kurtosis specifies the peaked distribution of the observation making long thin tail. The contrast, the negative kurtosis represents the case of the flat spreading of observations (Pallant and Manual 2007).

The criteria set as peer the rule of thumb specifies the range of -3 to the +3 for ensuring the normality of the distribution form the perspective of the skewness (Kline 2011). Whereas, the acceptable values tent to fall in the range of -1 to +1 for kurtosis. In this study, SPSS is used for the measurement of the skewness and the kurtosis of the distribution which covers the standardized score (z value) of the skewness and the kurtosis

## 6.2 Factor analysis

This is a systematic technique carried for the reduction of the variables from a large data set into a small and manageable data set which explains the latest variable. This approach is applied for assessing the degree of variables ability to explain something in mutual (Hair et al. 1998). In this study, exploratory factor analysis was carried and the used of varimax rotation is implied for the extraction of the better-quality clarification of the variables (Kline 2011)

Table 6.2 contains the outcome of the rotated matrix where the three two independent variable is extracted for the further analysis of the findings made in this research. (Hair et al. 1998{Pallant, 2013 #197) recommended the extraction of factors based on the criteria of eigen value which should be greater than or equal to 1 is implied in this research. The selection of the variables for the further procedure of the data analysis is illustrated below in the table no.....(Hair et al. 1998).

The criteria set for testifying the factor analysis is

The range of 0.4= unacceptable.

Within a range of 0.5=miserable

Within a range of 0.6=mediocre

Within a range of 0.70 muddling,

Within a range of 0.80= meritorious

Within a range of 0.09 marvelous

Furthermore, the Bartlett's test (B -test) was conducted, which was found to be significant with (0.00 df=105 and KMO =0.910 approx chi-square= 1529.218)

<b>Rotated Component Matrix<sup>a</sup></b>				
	Component			
	1	2	3	4
SC1	<b>0,802</b>	0,106	0,276	0,132
SC6	<b>0,789</b>	0,243	0,101	0,287
SC5	<b>0,785</b>	0,253	0,134	0,059
SC2	<b>0,758</b>	0,260	0,168	0,178
SC3	<b>0,748</b>	-0,042	0,358	0,159
SC4	<b>0,731</b>	0,251	0,095	0,133
PAS4	0,216	<b>0,821</b>	0,226	0,202
PAS3	0,249	<b>0,813</b>	0,132	0,221
PAS2	0,218	<b>0,748</b>	0,372	0,190
PAS5	0,259	<b>0,709</b>	0,280	0,286
PAS1	0,132	<b>0,686</b>	0,402	0,326
CS3	0,219	0,383	<b>0,729</b>	0,263
CS2	0,300	0,206	<b>0,710</b>	0,224
CS5	0,200	0,410	<b>0,684</b>	0,344
CS1	0,339	0,284	<b>0,644</b>	0,408
CS4	0,260	0,403	<b>0,635</b>	0,342
Web4	0,189	0,301	0,230	<b>0,832</b>
Web3	0,181	0,195	0,278	<b>0,827</b>
Web5	0,193	0,460	0,243	<b>0,685</b>
Web2	0,254	0,209	0,368	<b>0,681</b>
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

Figure 2 6.1 Exploratory Factor Analysis

### 6.3 Assessment of the reliability

Data is the base of ground for the findings, reasoning, discussions and calculation. Hence, in order to present the research on the indisputable ground the confidence of

data is must, which can be acquired through reliability assessment of the data Reliability (Krippendorff 2018)). Reliability refers to the degree of stability of the constructs over a period.

In multiple measurements (Neuendorf 2016)The assessment of the reliability can be gained by two approaches known as test-retests and the Cronbach Alpha. As a name suggests in the test-retest method of reliability assessment data initial data measurement is backed by the second assessment which was not possible in this research due to the time limit. The common internal consistency reliability is Cronbach Alpha and composite radiality (Peterson and Kim 2013).

In this study, both Cronbach's Alpha and the composite radiality are used for the assessment of the data reliability. Cronbach's Alpha is an important and widely used approach for the reliability test where alpha indicators range from 0 to 1. The coefficient alpha of (Pallant 2013). The coefficient alpha generally should fall within the range of 0.7 to 1 for acquiring the acceptance representing the internal consistency. In this study, Cronbach's Alpha for website attribute and privacy and security presented in the form of service quality, switching cost and customer satisfaction were above 0.90 indicating excellent agreement of each items in measuring the different aspects of the single variable.

Table. 1 Reliability of scale: Cronbach's Alpha r

<b>Construct</b>	<b>Items</b>	<b>No of items</b>	<b>Cronbach's Alpha</b>	<b>Composite reliability</b>
<b>CS</b>	<b>CS1, CS2, CS3, CS4, CS5</b>	<b>5</b>	<b>0.916</b>	<b>0.812</b>
<b>Web</b>	<b>Web, Web3, Web4, Web5</b>	<b>4</b>	<b>0.903</b>	<b>0.843</b>
<b>PAS</b>	<b>PAS1, PAS2, PAS3, PAS4, PAS5</b>	<b>5</b>	<b>0.923</b>	<b>0.868</b>
<b>SC</b>	<b>SC1, SC2, SC3, SC4, SC5, SC6</b>	<b>6</b>	<b>0.906</b>	<b>0.897</b>

#### **6.4 Assessment of the validity**

Validity is the quality of the research and the confidence in the data stating the data is measuring what is intended to measure for the acceptance of the research findings. (Krippendorff 2018). It can be regarded as the degree of attainment in measuring what is purported to measure in the study. There are various methods to testify the validity of the

data whereas the specification of one approach ensuring the validity of the observation has not been made yet. Therefore, to attain the validity of the observation various approach corresponding to the nature and the method of the validity should be conducted (Pallant 2013). In this study, popular methods recommended by the (Hair et al. 1998) has been implied for accessing the validity of the observation. Four Methods of accessing the validity are; content validity,

#### **6.4.1 Content validity**

Content validity is concerned with the completeness of the content carried for the research ensuring the totality of every variable used in the research. Represent the coverage of the research adequately (McQueen and Knussen 2002). The content validity revolves around the relational aspects of the variables applied in the construction of the conceptual model along with its ability to express the meaningful concept (Hair et al. 1998).

The objective of this study is to measure the major factors of the customer satisfaction in the context of online platform in the form of service quality dimension. The impact of the switching cost in deviating the original one to one relationship of the independent and the dependent variables. This objective lead to the selection of the unavoidable attributes which stands out unique in terms of the retail context as a Web and the PAS. CS in the context of the service quality dimension has scope of various aspects whereas, consideration of the platform of the service in an exclusive format comes up with the variables implied in this research making it adequate to explain the concept in completely in a meaningful manner. Here, Web, PAS are best suited to tapping the satisfaction aspect of the online banking customers.

#### **6.4.2 Criteria Validity:**

In criteria validity, the resembling outside measures come into consideration which can also be conceptualized with the variables that we used in the operationalization of the latent variable (Kline 2011). The concern of this validity test is to make sure the constrains used in the research to are adequate to explain the variability in the test. In this study high performance of privacy and security attribute is believed to increase the customer satisfaction in the context of online banking users, if the switching cost comes into consideration then it customer satisfaction gained through the privacy and security will



diminish, whereas, customer satisfaction is still there gained through the privacy and security feature of the online banking. Therefore, criteria validity is established in the study.

### **6.4.3 Construct Validity**

The ability of the instruments accessed as the constructs of the study in generalizing the concept is the matter of concern in the construct validity which assures the accuracy of the measurement (Pallant 2013, Kline 2011).

The importance of the discriminant and the convergent validity in outlining the construct validity is highlighted by the scholars (Pallant 2013). The need of the notional entities entitled through the observation of the correlated measures makes this form of validation as the tough one. In this study, author has ensured the construct validity of all the instruments by extracting the variables from the literature. The variable used in this study are privacy and security, switching cost, customer satisfaction was extracted from the remarkable literature related to the dimensions of the customer satisfaction in the context of online platform.

### **6.4.4 Discriminant Validity**

Discriminant validity represents the degree of difference in the constructs used for the research ensuring the individuality of each constructs. This deals with the challenge of exploration of single concept with various variables which are related but has unique identity and the significance in the research (Kline 2011, Hair et al. 1998).

## 7.0 HYPOTHESIS TEST AND EMPIRICAL FINDINGS

### 7.1 Introduction

This chapter is composed of the results of the hierarchical regression analysis, test of hypothesis and the clarification of the interaction term. Overall, it is the discussion chapter explaining the result of the regression model systematically.

### 7.2 Regression Model

Regression analysis is a systematical tool assisting in analysing the association and the interaction between the variables i.e it is the statistical tool used for determining the relationship between the variables, assisting in predicting the impact or the response of independent variable over the other (Hair et al. 1998). In this study, multiple moderated regression analysis is used for the data analysis as it has the solo dependent variables getting impact from two independent variables simultaneously. In addition, the interaction effect is also carried out (Aiken, West, and Reno 1991). Here, in this case, the investigation is carried out to figure out the customer satisfaction (CS) of Nepalese online banking users where the constraints suggested by many authors in the greater extent known as the privacy and security (PAS) along with the website attribute (Web) of the online banking is taken into consideration. The impact of each independent variable on the depended variable is carried out in the of the analysis. In order to get a depth understanding of the individual variable impact the introduction of the interacting variable in terms of the switching cost perceived by the customers is also taken into consideration. The change in the association between the depended and the independent variable due to the entry of the interacting variable is the interesting analysis, which is formulated after the mean centred to eradicate the possibility of the multicollinearity problem in the data analysis.

The regression model for this study is presented in the mathematical format as following

$$CS = b_0 + b_1Web + b_2PAS + b_3SC + b_4FreOfTra + b_5D1 + b_6D2 + b_7Web*SC + b_8PAS*SC + \varepsilon$$

..... Equation 7.1

Assessment of the Regression Analysis is done by

$$\delta CS / \delta Web = b_1 + b_7(SC)$$

....Equation 7.2

$$\delta CS / \delta PAS = b_2 + b_8(SC)$$

..... Equation 7.2

Where:

Dependent Variable

CS= Customer Satisfaction

Independent Variables:

Web= Website attribute

PAS=Privacy and Security

FreOfTra= Frequency of Transactions

Interacting Variable:

SC=Switching Cost

Control Variable:

D1= Duration of banking relationship

D2= Duration of online banking relationship

Interaction Effect:

Web\*SC

PAS\*SC

$b_0$  =Constant  $b_1, b_2, b_3, b_4, b_5, b_6, + b_7, b_8$ = regression coefficient and  $\epsilon$ =Error term

### 7.3 Assumption of Multicollinearity

According to (Hair et al. 1998) multicollinearity is the extent to which independent variables in a relationship possess the features of near-linear dependencies resulting in the possibility of dependent variable being explained by the intercorrelation of the independent variable. It is the problematic cause where one predictor variable in a multiple regression can be linearly estimated in a substantial degree from the other variable in a relationship. However, the impact of multicollinearity in the reliability of the study along with the findings is limited in

the context of the whole research. However, its impact on the individual level is affected in a greater extent if the independent variable is highly correlated with one another (Sen 1990). In this study, multiple regression is implied for the data analysis where the single dependent variable CS, is affected by two independent variables Web and PAS respectively. In such cases, the inferences based on regression can be misleading the findings of the analysis. (Montgomery, Peck, and Vining 2013)

There are primarily four major sources of the multicollinearity such as data accumulation method implied, model specification, an over-defined model, the specification of the model. There are various approaches to detect the multicollinearity such as; investigation of the correlation matrix; variance Inflation factors and tolerance; eigenvalues and condition numbers analysis and the variance component (Sen 1990).

In cases of the tolerance and the variance inflation factors for the multicollinearity test these values are inversely related and the range of data acceptance range is tolerance level should be greater than 0.1 while the VIF should be lesser than 10 (Sen 1990).

This study contains the interaction effect, which comes with the possibility of a multicollinearity problem. Hence, the mean centred values of each variable are taken into consideration for the analysis. According to (Pallant 2013, Hair et al. 1998) the possibility of multicollinearity in a data analysis exists in case the inter co-relation between the variables exceeds 0.9. In this study, table 7.1 represents the correlation matrix with collinearity test. In order to detect the influence of the multicollinearity in this case Variance Inflation Factor (VIF) it should be less than 10. In addition, the cut-off point for tolerance is 0.1 in a scale of 0 to 1

Table. 7.1 Correlation matrix with collinearity Test

Factor	1	2	3	4	5	6	7	8	9
1.CS	1	,751**	,748**	,612**	,208*	-0,120	-0,070	-,281**	-,216*
2. Web		1	,680**	,522**	0,129	-0,135	-0,041	-0,160	-,209*
3. PAS			1	,539**	0,084	-0,118	-0,052	-,209*	-,261**
4. SC				1	-0,041	-0,169	-,237**	0,031	0,074
5. FreTr <sup>b</sup>					1	0,138	0,112	0,053	0,081
6.D1 <sup>b</sup>						1	,594**	0,103	0,103
7.D2 <sup>b</sup>							1	0,067	0,064
8.INTER Web*SC								1	,841**
9.INTER PAS*SC									1
<sup>a</sup> . Mean	5,198	0,000	0,0000	0,000	3,02	3,85	2,351	0,877	0,855
Std.Deviation	1,1564	1,264	1,194	1,339	1,390	2,6156	1,476	2,297	2,17077
Tolerance	n/a	0,476	0,455	0,543	0,923	0,623	0,605	0,289	0,263
VIF		2,101	2,199	1,842	1,084	1,604	1,654	3,455	3,798

<sup>a</sup> Mean cecentred variables

<sup>b</sup>Transformed variables into natural logarithm

## 7.4 Regression Analysis

The regression model is articulated based on the conceptual model to investigate the hypothesis of this study for the detailed understanding of the variables as follows:

The conceptual model of this study consists of three types of variables in the formation of a concept of CRM as a whole; one is the independent variable such as Website attribute and the second is the privacy and the security of the online banking; one dependent variable in the form of customer satisfaction and the third one is the control variable presented in the form of the duration of relationship with the bank. As per the nature of the variables used in the relationship, this study contains the control variable effect, main effects and the

interaction effect. This regression model is composed of a three-step approach for testing the hypothesis of this study suggested by (Buvik and Andersen 2002). In the first approach, the control variable is operated for the regression analysis. Secondly, the main effect of the dependent variable in the independent variable is overlooked through the regression analysis including the control effect. Ultimately, the last model is the complete model, which covers all sorts of the variables for the regression analysis.

**Table 7.2: Hierarchical Regression Analysis (Model 1)**

Coefficients <sup>a</sup>						
Model 1		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,401	0,200		27,061	0,000
	D1	-0,053	0,048	-0,121	-1,121	0,264
	D2	0,002	0,084	0,002	0,019	0,985
a. Dependent Variable: Mean_CS						
<b>R<sup>2</sup> adj= -0.001, R<sup>2</sup>change= 0.014, F=0.951 F (2,131) =0.95, P= 0.389</b>						

Overall assessment of Model 1 shows it is not significant statistically at  $p < 0.389$  as the table shows  $R^2 = 0.014$ . Therefore, we can say control variable cannot make any impact on the relationship between the variables.

**Table no 7.3 Hierarchical Regression Analysis (Model 2)**

Coefficients <sup>a</sup>						
Model 2		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,847	0,156		30,994	0,000
	D1	-0,007	0,026	-0,015	-0,257	0,797
	D2	0,010	0,047	0,013	0,210	0,834
	Web_centered	0,331	0,062	0,362	5,349	0,000
	PAS_centered	0,351	0,065	0,363	5,363	0,000
	SC_centered	0,202	0,052	0,234	3,876	0,000

	FreqofTran	0,117	0,040	0,141	2,895	0,004
a. Dependent Variable: Mean_CS						
R <sup>2</sup> = 0.716, Adjusted R <sup>2</sup> = 0.703, F (6,127)53.476 P<0.00						

The second model include the major independent variables Web, and PAS along with the control variable in the regression analysis with the dependent variable customer satisfaction to test the hypothesis H1a, H1b, H2, H3a, H3b ( $R^2= 0.716$ ,  $P<0.00$ ). The increment in the explanatory power can be observed compared to the first model where the R square he changed from 1.4% to 71%

**Table 7.4 Hierarchical Regression Analysis (Model 3)**

<b>Coefficients<sup>a</sup></b>						
Model 3		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,874	0,147		33,221	0,000
	D1	-0,003	0,025	-0,006	-0,103	0,918
	D2	0,014	0,045	0,018	0,317	0,752
	Web_centered	0,329	0,059	0,360	5,619	0,000
	PAS_centered	0,330	0,063	0,341	5,205	0,000
	SC_centered	0,212	0,052	0,245	4,089	0,000
	FreqofTran	0,119	0,038	0,143	3,098	0,002
	SC_Web_centered	-0,169	0,041	-0,336	-4,089	0,000
	SC_PAS_centered	0,107	0,046	0,200	2,327	0,022
a. Dependent Variable: Mean_CS						
R <sup>2</sup> = 0.756, Adjusted R <sup>2</sup> = 0.740, F (8,125) 48.338 , P<0.00						

Similarly, the third model is including the interaction effect and it represents the overall result. This model is statistically significant at  $p<0.00$ . We can observe the increment in the

value of R square by 5% from model 2 to the model which signifies the contribution made by the interaction effect (SC\*Web) and the (SC\*PAS) in deviation.

## 7.5 Test of Hypothesis

This section covers the hypothesis testing and discussion of the study grounded on regression analysis.

$$CS = b_0 + b_1Web + b_2PAS + b_3SC + b_4FreOfTra + b_5D1 + b_6D2 + b_7Sweb*SC + b_8PAS*SC + \varepsilon \dots\dots(1)$$

$$CS = 4.87 + 0.329Web + 0.330PAS + 0.212SC + 0.119FreOfTra - 0.003D1 + 0.014D2 - 0.169web*SC + 0.107PAS*SC + \varepsilon \dots\dots \text{Equation 7.4}$$

In this study, the regression model 2 presented in the table is referred for the analysis of the relationship between the dependent, independent variable and the interacting variable. There are two independent variables; Website attribute (Web) and Privacy and security (PAS), one dependent variable customer satisfaction (CS) and one interacting variable switching cost (CS). In order to determine the core factors of customer satisfaction in the context of online banking and the impact of the switching cost in the relationship of these variables 6 hypotheses are developed as follows:

In this study, substitution of the figure from table 7.2 from above, we can reformulate regression equations follows:

$$CS = b_0 + b_1Web + b_2PAS + b_3SC + b_4FreOfTra + b_5D1 + b_6D2 + b_7Sweb*SC + b_8PAS*SC + \varepsilon \dots\dots \text{Equation.....7.4}$$

### Hypothesis 1:

**H1a. There is positive association between the service quality and the customer satisfaction in online banking.**

The first hypothesis H1a is relate to the effect of the website attribute (Web) on customer satisfaction in in the context of online banking at a significant level of  $p < 0.00$  i.e. increment



in the website dimension highly assists in the increment of the customer satisfaction. This hypothesis is proven by the result ( $b_1 = 0.329$ ,  $t = 5.619$ ,  $p < 0.00$ ). This implies that, improvement in the website dimension of online banking highly influences the customers satisfaction of Nepal.

**H1b. There is positive association between privacy & security and the customer satisfaction in online banking.**

This hypothesis is claimed with the expectation of impact made by the PAS in customer satisfaction. i.e. the increment in the PAS of online banking greatly assists in boosting the satisfaction of online banking users. This claim is supported significantly with the result. ( $b_2 = 0.330$ ,  $t = 5.205$ ,  $p < 0.00$ ). This hypothesis claims that the upliftment in the satisfaction of online banking users can be gained through the enhancement the privacy and security of bank.

**H2. There is positive association between the frequency of the transaction and the customer satisfaction in online banking.**

Result regarding frequency of transaction (H2) illustrates the positive impact of the frequency of transaction on the customer satisfaction. This hypothesis was set by considering the correlation of frequency of transaction and the customer satisfaction. The hypothesis expects that the frequency of transaction signifies the usefulness of the online banking service. i.e. higher the frequency of transaction in online banking higher is the satisfaction customer achieved using online banking. ( $b_4 = 0.119$ ,  $t = 3.089$ ,  $p < 0.002$ ) which gives strong evidence both empirically and statistically to support the hypothesis.

**Hypothesis 3**

The third hypothesis (H3) involves how switching cost affects the website attribute and ultimately on the customer satisfaction. The association between the website attribute and the customer satisfaction becomes less positive when the switching cost increases. The third hypothesis (H3a) of this study concentrates on the impact of switching cost in the association of the customer satisfaction and the website quality. First, partial derivative of customer satisfaction (CS) with respect to the website attribute (Web) was conducted based on the regression model estimated in equation....7.4

$$\partial CS/\partial Web = b_2 + b_3 SC$$

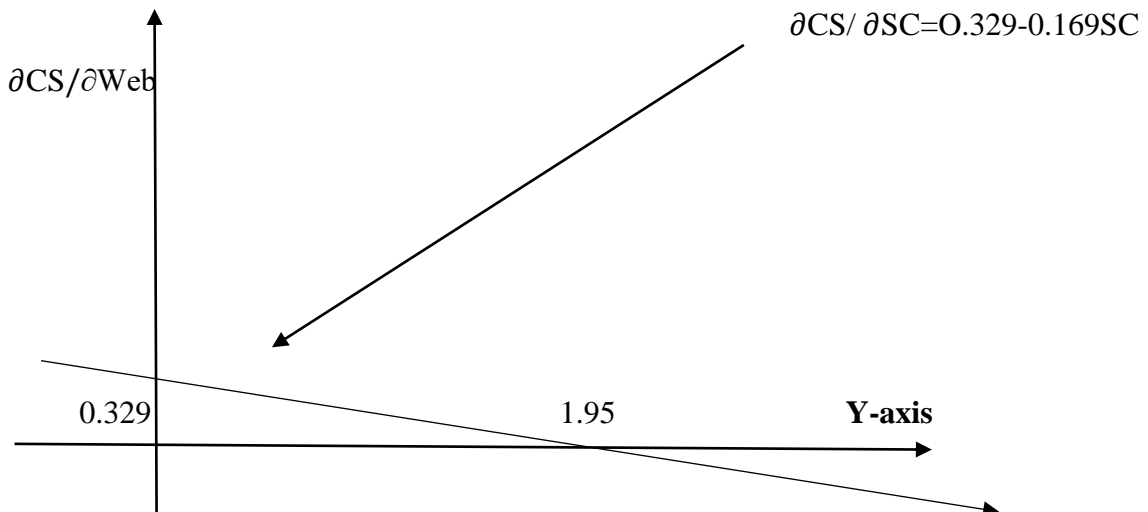
.....Equation 7.5

$$\partial CS/\partial Web = 0.329 - 0.169S$$

This hypothesis was created to estimate the impact of the switching cost in customer satisfaction regarding the website dimension of online banking users. The relationship between the website dimension and customer satisfaction is found to be inversely associated when switching cost is introduced. The association between the website and customer satisfaction is found to be positive in the first hypothesis. In this hypothesis (H3) the interaction effect of switching and website attribute results in decreasing the satisfaction of the customer the increment in the switching cost decreases the website attribute resulting in dropping the customer satisfaction. Further, this relation is found to be significant i.e. ( $b_2 = -0.169$ ,  $t = -4.089$ ,  $p < 0.00$ ) Thus, the analysis strongly supports the third hypothesis.

**Effect of Website attribute on customer satisfaction at different levels of switching cost**

**X-axis**



The downward sloping line illustrates the negative impact of the switching cost in the association created between the website attribute and the customer satisfaction of Nepalese online banking users. It simply means the inverse impact of the switching cost in the customer satisfaction gained through the website dimension. If the level of the switching cost increases in online banking then the effect of the website attribute will be decreased on

customer satisfaction. Hence, the second hypothesis is also proved to be true in the context of online banking customers. Initially, the mean centred value was considered in the regression analysis in order to avoid the probability of the multicollinearity which was (Figure 7.1) above portrays the estimated main effect of the asymmetric switching cost on the customer satisfaction when the website is at its mean value. If I replace the real mean value of the website dimension, then the exact value at the switching cost interception is  $4.8340+1.95 = 6.78$

Here, the graphical presentation of the interacting effect is plotted to gain clarity of the relationship between the website attribute and customer satisfaction in the presence of the switching cost. The graph illustrates the relationship between customer satisfaction and the website attribute on different levels of the switching cost. The downward sloping lines illustrate the negative association between the switching cost and the change in the level of customer satisfaction as an impact of the change in the level of website attribute. The increasing level of switching cost diminishes the impact of the website attribute on customer satisfaction, which is positively associated. Simply, the increment in the switching cost lowers the satisfaction of the customer in the case where the website attribute is the underlying factor of the satisfaction. This study includes the interacting effect of the website attribute with the switching cost. Thus, our empirical finding demonstrates that the consideration of switching cost in a relationship as an integrating variable can deviate the existing relationship of customer satisfaction and website dimension.

### **Hypothesis 3b**

The association between privacy & security and customer satisfaction is significantly decreased with the increase of switching cost.

This is the second interaction effect established as per the conceptual model of this study. Here, the switching cost is considered for the interaction effect with the privacy and the security of online banking for the deviating relational analysis. The proposed hypothesis was significantly supported by the statistical result obtained over the table 7.4 model no 3

Additionally, the regression model 7.4 was used for the formulation of the first partial derivation of customer satisfaction with respect to the privacy and the security of online banking. The third hypothesis (H3b) involves how the switching cost affects the customers privacy and security dimensions with respect to the customer satisfaction of the online banking users.

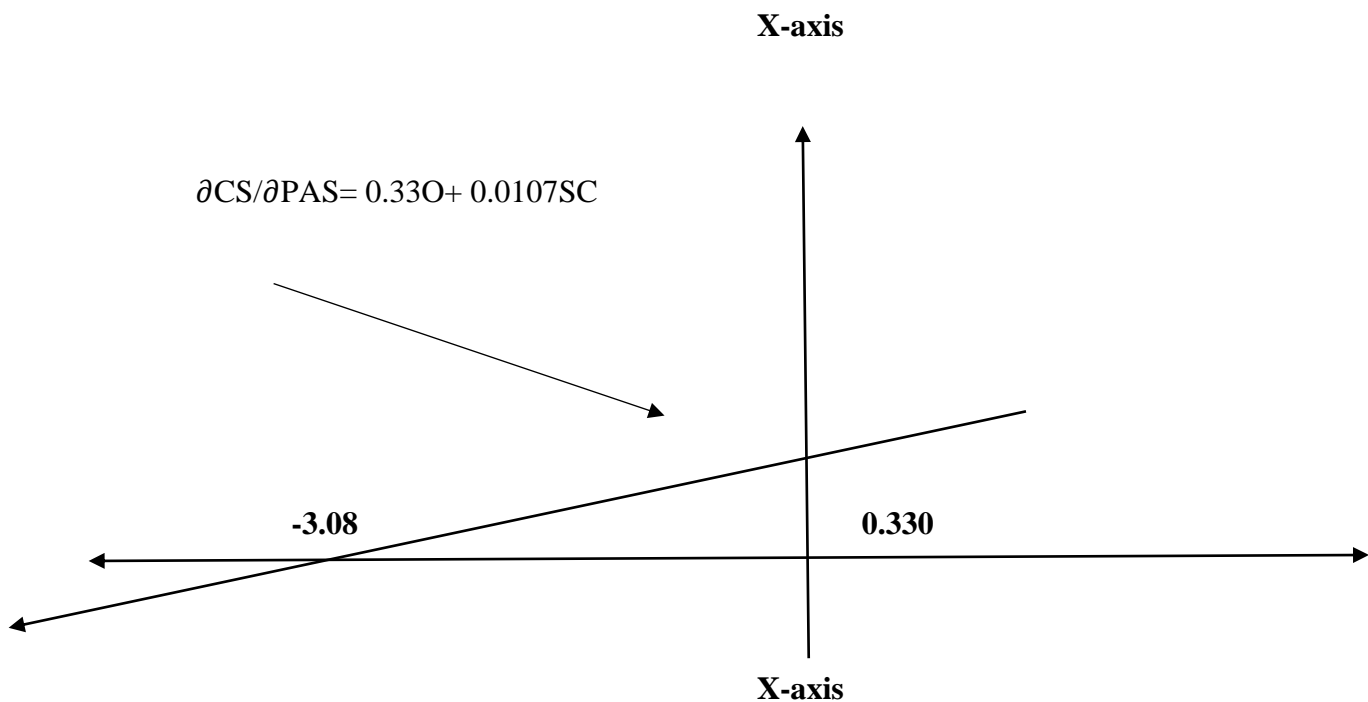
The relationship between the switching cost and the privacy and security is found positive i.e. switching cost increase, privacy and the security also increases along with the increment of the customer satisfaction, see, fig 7.2 The upward slopping line indicates the increasing level of the switching cost increases the positive association created between the privacy and security along with the customer satisfaction. In addition, this interaction effect in the regression model 3 was significant at ( $b_2=0.330$ ,  $t= 2.327$ ,  $p<0.022$ )

**Effect of Privacy and security on customer satisfaction at different levels of switching cost**

$$\delta CS/ \delta PAS= b_2+ b_8(SC).....$$

$$\partial CS/\partial PAS= 0.330+ 0.107SC$$

**Effect of Privacy and security on customer satisfaction at different levels of switching cost**



The later hypothesis H3b originates with the interaction effect of the switching cost and the privacy and the security on customer satisfaction to access the impact of the switching cost the change made in the relationship of the customer satisfaction. The relationship between the switching cost and the privacy and the security quality dimension is found to be positive, i.e. as switching cost increases, privacy and the security presented in the form of the quality dimensions increases, and thus the satisfaction of the customer also increases. This relationship is significant ( $b_2 = 0.107$ ,  $t = 2.327$ ,  $p < 0.022$ , one tail)

$\partial CS/\partial PAS = b_2 + b_3 SC$  equation...

As mean centred value of privacy and security was used in the beginning to avoid multi collinearity. If I replace the real mean value of the website dimension, then the exact value at the switching cost interception is

$$5.2731 - 3.08 = 2.913$$

Though the independent variable of this study is associated positively with the dependent variable customer satisfaction of online banking, introducing the switching cost concept in the analysis of the study extracts two completing contrasting outcome.

This is because of the fact that each dimension of the switching cost has its individual contribution in shaping the complete concept of the switching cost and the direction of deviation in the relationship i.e. positive or the negative is also determined by the antecedents of the perceived switching cost (Barroso and Picón 2012).

### **7.5.1 Effects of Control Variables**

In this study, there are two control variables presented in the form of duration of banking relation (D1) and the duration of online banking relation (D2). From table number 7.1 which represents the first model is not strong enough as p vale 0.0.918. One of them D1 has a negative relationship ( $b_5 = -0.003$ ,  $t = -0.006$ ,  $p < 0.918$ ) and the next has the positive association with the customer satisfaction ( $b_6 = 0.014$ ,  $t = 0.317$   $p < 0.918$ ).

In this study, the main objective is to determine the relationship between the service qualities, customers satisfaction in the light of the switching cost. One type of the variable, which is used in this multiple regression analysis apart commencing the main effect, is the control effect. The control variables of this study are the duration of existing relationship (D1), and the duration of the online banking relationship (D2) which represents the situational factor of this study which is further explained in detail.

Duration of existing relationship (D1):

D1 in this model represents the total amount of years that the customer has been in the relationship with the bank. This relation duration covers the years invested by the customer as the user of the banking services form the very beginning of the opening account in that specify bank.

## 7.6 Chapter Summery

### 7.6.1 Summary of the Hypothesis Test

Hypothesis	Coefficient	T-value	Findings
H1a There is positive association between the website attribute and the customer satisfaction in online banking.	0,360	5,619	Supported
H1b There is positive association between the privacy & attribute and the customer satisfaction in online banking.	0,341	5,205	Supported
H2 There is positive association between the frequency of the transaction and the customer satisfaction in online banking.	0,143	3,098	Supported
H3a The association between the website attribute and the customer satisfaction becomes less positive when switching cost is introduced.	-0,336	-4,089	Supported
H3b The association between privacy & security and the customer satisfaction is significantly decreased with the increase of switching cost.	0,200	2,327	Supported

## 7.7 Summary

In this chapter regression analysis was carried for testing the hypothesis designed in chapter three. All the hypothesis (H1a, H1b, H2, H3a, H3b) used in this study were supported.

## **8.0 SUMMARY, DISCUSSION, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH**

### **8.1 Introduction**

This is the final chapter, which aggregates the theme of the research objectives, hypothesis creation, model presentation and the analyzation of the data after ensuring its validity and reliability. It contains the summary and the discussion of the findings. The crucial aspect of the research applied, and the theoretical implications are drawn respectively which is followed by the future research recommendations based on the available limitations of the research.

### **8.2 Summary of findings**

the summary of this research can be gained through the standpoint of three major hypotheses which is explored further with the interaction effect. The general overview of the service quality and customer satisfaction gives the idea of the positive association between these variables (Bai, Law, and Wen 2008, Chen and Cheng 2009). The investigation carried for the service quality dimensions and customer satisfaction comes up with the finding that there is a strong positive corelation between the website attributes and the customer satisfaction. The sub-hypothesis of the first hypothesis also reflects the strong positive association between privacy and security and the customer satisfaction. The second hypothesis was designed to investigate the relationship between the frequency of transaction and the customer satisfaction. This hypothesis comes with the positive finding supporting the existing literature that the customer satisfaction of online banking can be boosted with respect to the frequency of transaction carried in the online platform (Nui Polatoglu and Ekin 2001). The third hypothesis is the investigation carried for the acknowledge the impact of the switching cost in the study. This hypothesis gives the interesting findings that the service quality presented in term of the web attribute has a negative impact on the association of the web attribute and customer satisfaction. This is especially because of the inverse relation shared by the web attribute and the switching cost. The final hypothesis which diagnoses the impact of switching cost in deviating the relationship between the privacy and security and the CS gives the finding that privacy and security is positively related to the customer



satisfaction. This finding reflects crucial aspects of the privacy and security that customers consider in online banking.

### **8.3 Discussion**

The major objective of this study was to examine the service quality dimensions of customer satisfaction in the context of the Nepalese banking sector. This study covers the major two service quality dimensions website attributes along with the privacy and the security of online banking for the detailed and exclusive understanding of the online banking platform. In addition, the deviation in the association of service quality and customer satisfaction on the presence of the switching cost was also investigated. This research supports the findings made in the field previously; service quality dimensions and the switching cost has a positive relationship with customer satisfaction. However, the findings extracted from the introduction of switching cost in the relationship gives a new direction in the relationship that each of these variables shares together.

### **8.4 Theoretical Implications:**

The contribution made by researchers in the literature of service quality, switching cost and customer satisfaction is broad. In fact, the literature of e-CRM is has covered the broader perspective by including additional variables in the relation interpretation of these components. However, the analysis carried in the investigation conceptual understanding of these three components is limited. This research has explored the impact of switching cost as an interacting variable to diagnose the derivation of the web attribute and the PAS with respect to customer satisfaction. In this research, the investigation is carried for determining the relationship between the service quality dimensioning and customer satisfaction in the light of the switching cost for the online platform. In addition, it has covered the Nepalese market for the research which is just in the phase of exploring the online platform. This study has made a contribution to exploring the growing market. It gives the insight idea of market operation mechanism need on the perspective of online banking users where technological acceptance is still in the phase of struggling.

Though the service quality dimensions; website attribute and the privacy and security of bank share a common ground of positive association with customer satisfaction. The shift in the direction of its association as an impact of the switching cost is the contrasting finding made by the researcher to the literature of e-CRM. In addition, the findings made on the frequency of transaction can assist in a great extent to the organizations for maximizing the business benefit on the basis of relationship with the customer.

## **8.5 Managerial Implications**

This study has addressed the most common but crucial aspect of the business operation in terms of the e-CRM. Here, with the findings made regarding the positive association of the service quality and customer satisfaction, it suggests the banking industry focus on enhancing their online service quality aspect to increase customer satisfaction.

The findings of this study, suggest that banking industry should focus on identifying the customer group with respect to their switching cost variation and address the variation on their preference of the service quality dimension in the favour of the banking industry. Here, comes the significant role of the bank in designing and injecting the magnitude of SC which is the aspect of e-CRM.

Despite the fact, that both of these service quality dimensions (Web, PAS) has a strong positive impact on the CS. The customers with higher switching cost appreciate the PAS dimension more than the banking customers with low switching cost. Whereas, the banking customer with lower switching cost appreciates web attributes of quality service more than the PAS quality dimension. As per the antecedents of the SC, there are two dimensions aspects of shaping the SC for the customers either from personal characteristics along with the relational characteristic. In the context of higher switching cost, it might possibly be the relational factor where the breath of relationship existing in terms of dependency can act as a factor for shaping CS.

In general, switching cost is lower in the context of online banking of Nepal as the result of a competitive market setting with the low investment requirement. However, the exceptional case of perceiving SC as high can come into the play when the customer is locked in the form of a bank loan. The bank loan can be a key factor for the dependency of the online banking users to the bank as each dimension of the SC can act reflect the adverse impact. In such a case, the operational relationship of online banking customers to the bank is intense

with higher dependency. Each dimension of SC can be impactful leading the situation of higher SC. The bank possesses additional personalized information of such customers. These groups of customers have concern over the protection of their information rather than the web attribute of an online bank. From the customer's perspectives of this group, the web attribute is under their control. i.e. usability of banking platform through the web is based on their operational banking capability (Low 1992). However, PAS is the service quality factor which is in the access of the bank. The superiority in the degree of customer satisfaction gained through the web attribute of banking platform is higher to the lower switching cost

customer in comparison to the PAS. In this regard, propensity for the shaping SC is the external factor. These cover the customer excitement aspect gained through the use of various services which is strongly backed by their knowledge of attractiveness of the alternative (Pablo Macias Lopez, Polo Redondo, and Sese Oliván 2006).

In this study, the finding made on the frequency of transaction gives the idea of a positive association between the FreqOfTran and the CS. Hence, this association should be taken into consideration of e-CRM. In order, to amplify the number of satisfied customer bank should give make some incentives for customers to use all the possible facilities of online banking. Once, the interest of incentive drive to the understanding of convenience customer satisfaction can be in the favour of the bank.

## **8.6 Limitation of studies and areas of further study:**

Despite the fact, that coverage of three crucial variables are considered in the relational analysis for the depth understanding of the subject. This selection conducted for the relation analysis of e-CRM gives the scope of coverage limit. In addition, variables used for the assessment of the relation of service quality dimension and the customer satisfaction is only two. This study contains the scenario of Nepalese online banking users and the banks which is in the stage of growing. In such case the findings gained from this study cannot be generalized to other sectors where the technology enhancement has been accepted and operated. The study was an attempt to explore the service quality dimension of online platform.

Additional studies should be more focused on the synchronizing this concept of service literature from the supply chain management perspective the expansion in the dimensions of the service quality.



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## 10.0 Appendix:

Appendix 1: Descriptive statistics and Univariate Normality

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Mean_CS	134	1,00	7,00	5,1985	1,15648
SC_centered	134	-3,50	2,50	0,0000	1,33911
PAS_centered	134	-4,27	1,73	0,0000	1,19411
Web_centered	134	-3,83	2,17	0,0000	1,26437
FreqofTran	134	1	5	3,02	1,390
D1	134	0,5	14,0	3,854	2,6156
D2	134	0,5	7,0	2,351	1,4767
SC_PAS_centered	134	-6,05	14,97	0,8555	2,17077
SC_Web_centered	134	-7,59	13,43	0,8773	2,29742
Valid N (listwise)	134				

Appendix 2

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CS1	134	1	7	5,16	1,383	-0,819	0,209	0,688	0,416
CS2	134	1	7	4,99	1,527	-0,798	0,209	0,406	0,416
CS3	134	1	7	5,30	1,257	-0,560	0,209	0,206	0,416

CS4	134	1	7	5,10	1,203	- 0,493	0,209	0,536	0,416
CS5	134	1	7	5,44	1,289	- 0,657	0,209	0,205	0,416
SC1	134	1	7	4,54	1,540	- 0,366	0,209	- 0,190	0,416
SC2	134	1	7	4,54	1,459	- 0,392	0,209	0,113	0,416
SC3	134	1	7	4,42	1,761	- 0,423	0,209	- 0,615	0,416
SC4	134	1	7	4,32	1,763	- 0,350	0,209	- 0,672	0,416
SC5	134	1	7	4,58	1,619	- 0,290	0,209	- 0,462	0,416
SC6	134	1	7	4,61	1,584	- 0,214	0,209	- 0,616	0,416
Web2	134	1	7	4,65	1,623	- 0,336	0,209	- 0,611	0,416
Web3	134	1	7	4,75	1,427	- 0,407	0,209	- 0,059	0,416
Web4	134	1	7	4,97	1,365	- 0,413	0,209	- 0,265	0,416
Web5	134	1	7	4,96	1,312	- 0,316	0,209	0,145	0,416
PAS1	134	1	7	5,32	1,352	- 0,659	0,209	0,167	0,416
PAS2	134	1	7	5,38	1,408	- 0,737	0,209	0,065	0,416
PAS3	134	1	7	5,25	1,469	- 0,884	0,209	0,643	0,416
PAS4	134	1	7	5,21	1,310	- 0,538	0,209	- 0,037	0,416

PAS5	134	1	7	5,21	1,287	- 0,592	0,209	0,601	0,416
Valid N (listwise)	134								

Appendix 3 (a) Factor analysis; KMO measure of sampling adequacy, Bartlett Test of Sphericity

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,910
Bartlett's Test of Sphericity	Approx. Chi-Square	1529,218
	df	105
	Sig.	,000

Appendix 3(b)

#### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7,979	53,192	53,192	7,979	53,192	53,192	4,136	27,576	27,576
2	2,038	13,586	66,778	2,038	13,586	66,778	3,917	26,114	53,690
3	1,185	7,897	74,676	1,185	7,897	74,676	3,148	20,985	74,676
4	,555	3,699	78,375						
5	,508	3,387	81,762						
6	,495	3,302	85,065						
7	,369	2,461	87,525						
8	,326	2,174	89,700						
9	,293	1,955	91,654						
10	,281	1,873	93,527						
11	,276	1,839	95,366						
12	,231	1,540	96,907						
13	,185	1,236	98,142						
14	,159	1,063	99,205						
15	,119	,795	100,000						

Extraction Method: Principal Component Analysis.

**Rotated Component Matrix<sup>a</sup>**

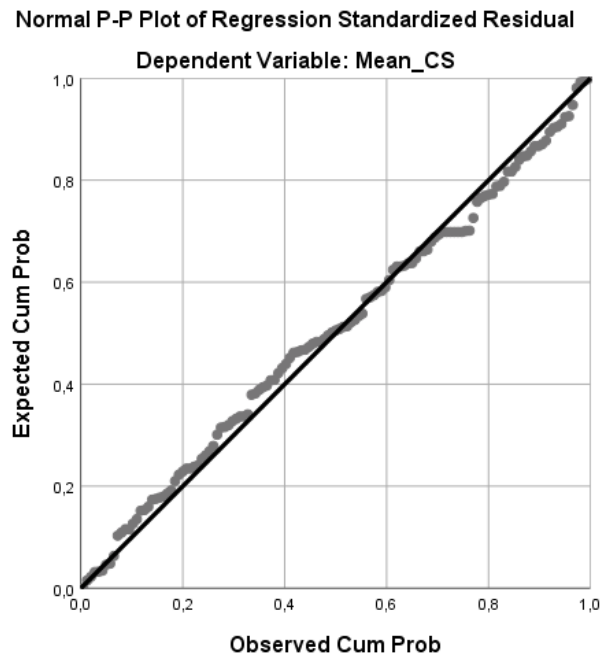
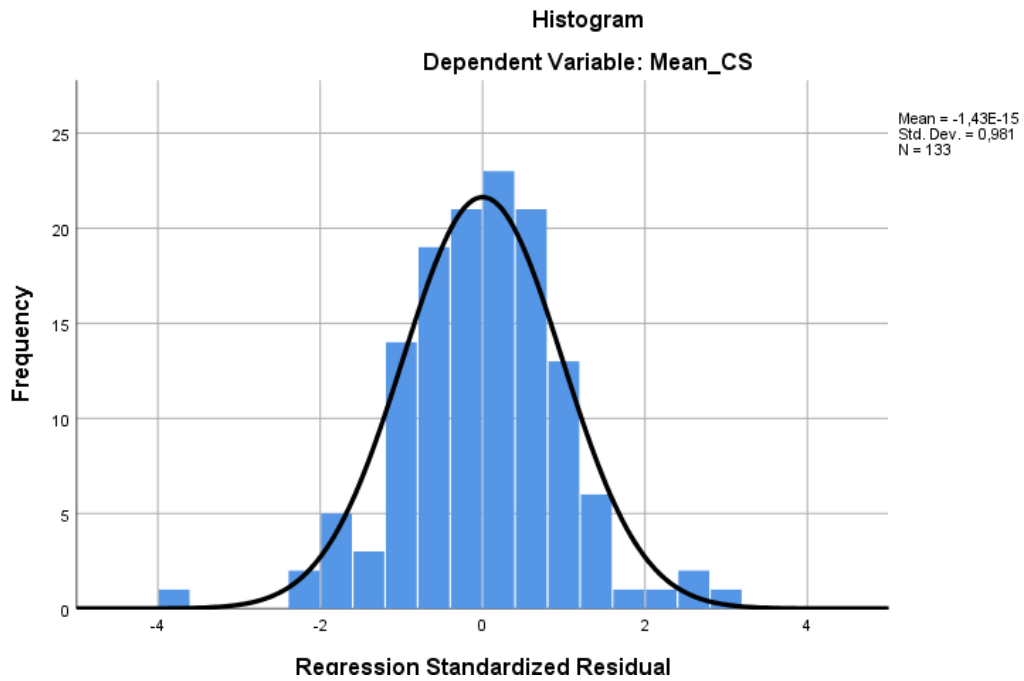
	Component		
	1	2	3
Web2	,286	,267	,759
Web3	,196	,236	,859
Web4	,197	,327	,838
Web5	,206	,482	,694
PAS1	,167	,744	,404
PAS2	,244	,807	,261
PAS3	,239	,823	,205
PAS4	,219	,849	,218
PAS5	,278	,735	,327
SC1	,832	,151	,186
SC2	,765	,285	,183
SC3	,791	,021	,259
SC4	,724	,259	,130
SC5	,786	,276	,051
SC6	,787	,244	,262

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

## Appendix 4 Linearity Assessment



Appendix 5:

Dear Respondent,

I am a student of Master program in the Molde University College, a specialized University in Logistics, Norway. I am conducting this survey to figure out the impact of service quality dimensions on customer satisfaction in the context of Nepalese banking sector. The main purpose of this research is to pinpoint the influence of switching cost in service quality dimensions and its impact in customer satisfaction in online banking.

In Nepal, the concept of online platform itself is new with the internet users of 54.64%. In addition, introducing sensitive topic known as online banking is a challenging subject. Whereas, the unavoidable technical demand facilitated with the high degree of comfort and safety influences the customer to use online banking. The tentative half of the market which is uncovered with the internet penetration of 61.09% displays the high scope of business expansion in Nepal. Here, online banking is taken into consideration as a subject matter. This research will assist in identifying the influencing e-service dimensions and their respective relation with the customer satisfaction of banking sector.

Your patient and sincere opinion in filling the form will contribute in tracking the customer's perspective which can be strong support in recognizing the extents of improvement in dimension of service quality regarding e-banking. Therefore, your response is highly appreciated. It is requested to openly express your opinion based on recent scenario counting the unusual issues such as problems and unexpected support from e-banking. Your frame of reference in the survey will be highly confidential and the written thesis may be provided to you upon your request.

This thesis is under the supervision of Dr. Arnt Buvik, professor and coordinator of the Master of Science Program in Logistics and engineering at Molde University College specialized in Logistics.

Finally, thank you in advance for your precious time, effort and the opinion that you will be investing in this survey.

Sincerely,

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Questions:

1 Do you use internet banking? Yes/ no

Please specify, why you don't use it?

Personal Details

Bank Name :

Gender: female/ male

Education level: primary/ secondary/ high secondary/ undergraduate/ post graduate/  
doctorate

Age:

Income range:

Frequency of online transaction:

Duration of time you have been using this bank: ...

Duration of time you have been using online banking in this bank: ...

Please click the appropriate number that best represents your opinion regarding the following statements based on your experience while using online banking.

Website attribute (1 strongly disagree 7 strongly agree)

- 1.1 The website of my bank always gives me more flexibility
- 1.2 The website of my bank contains almost every possible banking facility
- 1.3 The website design of my bank is extremely attractive
- 1.4 The website of my bank is completely user-friendly
- 1.5 The content of my banking website is extremely organized



## Privacy and security

- 2.1 I always feel safe using my online banking account
- 2.2 My personal information mentioned in online banking is completely protected
- 2.3 The financial information of my online banking is always free from being misused
- 2.4 My dealing in online banking has high confidentiality
- 2.5 Very often, the website of my bank strongly boosts my confidence in online banking

## Switching Cost

- 3.1 The continuity of online banking in this bank would assist me in receiving certain benefits which I would not receive if I switched to the next bank
- 3.2 I am not sure about the level of service I would be receiving in the case of switching to next bank
- 3.3 It takes a great deal of time to open new account for online banking in next bank.
- 3.4 If I were to switch my bank for online banking, I would have to learn completely how system works there
- 3.5 If I changed my bank, I would have to explain my details to my new bank completely
- 3.6 Overall, I have invested a lot of energy in maintaining relationship with my bank

## Customer Satisfaction

- 4.1 Overall, I am very satisfied with the services offered by internet banking platform.
- 4.2 I am completely satisfied with the online platform service charges/ price
- 4.3 Time saving in transaction really boost the online banking services of my bank
- 4.4 My bank comes up to my belief of a great online banking service provider.
- 4.5 Overall, I have positive impression towards online banking