

Self-service technology



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Determining Consumer Satisfaction and Commitment through Self-Service Technology and Personal Service Usage

Abstract

Self-service technology (SST) is very popular in any Hong Kong industry nowadays. Automatic Teller Machine (ATM) is one of SST which provides bank service. However, there is still a certain unknown about SST and personal service usage on its consumer satisfaction and consumer commitment.

The purpose of this report was to design a survey through bank service (i. e. ATM and personal service usage) in order to determine the consumer satisfaction and multidimensional measure of consumer commitment including: Affective Commitment, Continuance Commitment and Calculative Commitment. First of all, literature review will be set up in this report so as to define the SST, personal service usage, consumer satisfaction and commitment in bank service. Then the hypothesis model and conceptual framework will be predicted. The research methodology will then followed to indicate the data collection, sample design and data analysis. Furthermore, a survey questionnaire will be designed for ATM user to obtain respondent data. Then the survey results in sample size of 110 and data will be analyzed in SPSS. The data will then perform in descriptive statistic, reliability analysis, factor analysis and t-test. Discussion will be provided to study and explain the data that how to reach the aim of the report. Lastly, conclusion will be involved with further potential research.

Keywords:

Self-service technology, personal service, consumer satisfaction, consumer commitment, affective commitment, continuance commitment and calculative commitment

List of Abbreviations

SST = Self-Service Technology

PSU = Personal Service Usage

ATM = Automatic Teller Machine

SPSS = Statistical Package for the Social Sciences

PCA = Principal Component Analysis

Chapter 1**Introduction**

In this chapter, background of the study will be introduced. The study aim and research objectives will be discussed next. Follow with a report outline and scope of study will be presented. The limitation of research will be shown in the last part.

1. 1 Background of the study

Services are very important between a company and consumers. Personal service usage is the most common and traditional style between front-line staff and consumers. Personal service usage is a simple but practical service where the company can provide direct assistance from front-line staff to customer. However, the market is being revolutionized by technological innovations in every Hong Kong industry. Nowadays, this traditional service

was replaced by a modern type of service: Self-service technology (SST). Many organizations are increasing the use of technology to provide competitive services in order to attract more customers and stay ahead in their market, especially in bank service. Self-service technology (SST) defines as a technology interface that enables customer to produce and consume services without direct assistance from firm employees (Meuter et al. 2000). SST can certainly reduce labor cost to the service provider where personal service can provide direct service to client. This trend raises some important point about the impact of technology on service quality and customer satisfaction levels. For example: can the company maintain or improve the levels of customer satisfaction in removing employee/customer interface from its front line? There are limited empirical research studies on self service technologies impact on customer's perceived value on service delivery and its impact on their satisfaction level (Dabholkar 1994). Therefore, further study is required to have better insights on customers' satisfaction and commitment on self-service technology, especially on the account of increases in technological developments, and constant drive to use newer technologies to gain competitive advantage in the market place.

1. 2 Study Aim and Research objectives

The major aim of this report is to determine the consumer satisfaction and commitment through Self-service technology (SST) and personal service usage. A survey will be performed in this report and develop a test model of the affect of SST on consumers' satisfaction of the service and their commitment to the service provider. This report will also focus on the literature review which relevant to the study and the development of the

hypotheses which drive the study. On the other hand, the conceptual framework will then describe and the findings are presented by a deep investigation. After analyze by SPSS, a discussion of the results will then follows in this research. Eventually, further research will concludes the report. This report will contribute the understanding of the consumer satisfaction and commitment of the SST and personal service usage.

1.3 Report Outline

In this Chapter, rationale and background of the study will be stated.

Moreover, aims and objectives will be mentioned. The final part will be the outline of the study.

Chapter 2 states a review of relevant literature on SST, personal service usage, consumer satisfaction and commitment. A hypothesis model and the conceptual framework will then be set up.

Chapter 3 will focus on the Methodology of this research project. Research setting will be discussed in the first part. Then data collection will then follow to define how to gather data information for the survey method. Besides, a brief introduction of the questionnaire will also show in this chapter including pre-test and the structure of questionnaire. Lastly, data analysis will be presented how to analyze the obtained data.

Chapter 4 is the important part of the report that will present the result and discussion from the SPSS. Further discussion on the result of some skill: profile of interviewees, Descriptive Statistic, Reliability Analysis, Factor Analysis, Correlations Matrix, Factor Loadings and T-Test.

Chapter 5 will show the conclusion of the report and future studies will also suggested for further researcher.

1. 4 Scope of Study

This study aims to determine the consumer satisfaction and commitment through Self-service technology (SST) and personal service usage. Focus is placed on the bank service field which ATM will be an example of Self-service technology (SST) and teller will be an example of personal service usage.

1. 5 Limitation of Research

As atmosphere is a silent language, there is no definite answer on which one is better and which one is more attractive. The answers change among different people as different kind of people have different perceptions, like some people love pink color while some do not. Therefore, the figure and data is for reference only.

This study is going to be conducted by survey questionnaire, which may cause some disadvantages as interviewees may be too subjective, the researcher may fail to recognize the richness of the data collected and glean the insights on offer due to the lack of experience.

Chapter 2

Literature Review

This chapter will focus on the literature review which relevant to the study and the development of the hypotheses which drive the study. On the other hand, the conceptual framework will then describe.

2.1 Self-Service Technology

In order to respond to the rapid change of the external environment, service providers of most industries have increased the use of technology so as to improve their productivity and competitiveness. Kelley (1989) discusses that the role of technology in service organizations is to reduce costs and eliminate uncertainties. In the service sector, technology has been used to standardize services by reducing the interaction between employee and customer (Quinn, 1996). Some prior studies suggest that the traditional marketplace interaction is being replaced by a market space transaction (Rayport and Sviokla 1994, 1995). That means technology service weeds out personal service through competition. Also, there are numbers of customers who will interact with technology to create service outcomes instead of interacting with a service firm employee.

SST is an example of market space transactions in which no interpersonal contact is required between buyer and seller (Matthew L. Meuter, Amy L. Ostrom, Robert I. Roundtree, & Mary Jo Bitner, 2000). Previous studies have demonstrated that consumer benefits of using SST include convenience (Meuter et al., 2000; Reichheld and Schefter, 2000; Szymanski and Hise, 2000), save time and money (Meuter et al. 2000), avoiding interpersonal interaction (Dabholkar, 1996; Meuter et al., 2000) and being in control (Dabholkar, 1996; Zeithaml et al., 2000).

SST is a technological interface that enables customers to produce a service independent of direct service employee involvement. There are many kinds of examples about SST which are increasing across a range of service, from traditional high contact service to low contact service, they are: booking

tickets to watch a film through internet rather than going into the ticket counter; checking out of a hotel via the automated facility on the TV set in your hotel room rather than going down to the reception desk and queue a long time to interact with hotel staff; fuelling the car in the station by VISA card rather than asking staff to inject fuel.

Although there are many examples of SST listed above, the most classic example of SST is Automatic Teller Machine (ATM). ATM is an electronic computerized telecommunications device which allows bank's customers to make cash withdrawals and check their account balances at any time without the need for a human teller. It provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. The idea of this kind self-service in retail banking developed through independent and simultaneous efforts in Japan, Sweden, the United States and the United Kingdom. Many ATMs also allow people to deposit cash or cheques, transfer money between their bank accounts or even buy postage stamps. The general features and further information of Automatic Teller Machine will be posted in the Appendix.

2. 2 Personal Service Usage (e. g. Teller)

In recent years, people rely on gradually matured SST. Our daily life has become more and more convenient. But back to basic, SST was converted from the original and traditional kind of service: personal service usage. Personal service usage is a kind of service that has direct interaction between the front-staff of organization service provider and the consumer. Consumer can receive direct service from the staff without any technology.

Moreover, consumer can raise any question at that moment and can have prompt respond/answer from the organization. There are many example of personal service usage: ticketing counter, people can reach the ticketing counter to buy the appropriate ticket and watch film by asking the front-desk staff; reception desk, people can go to the reception desk to apply check-out service in a hotel; however, bank teller is the most appropriate example of personal service usage in this report.

A bank teller is an employee of a bank who deals directly with most customers. These employees are known as a cashier in some places. Tellers are considered as a “ front line” in the banking business. This is because they are the first people that customers reach at the bank and are also the people most likely to detect and stop cheat transactions in order to prevent losses at a bank (imitative currency and checks, identity theft, confidence tricks, etc.). The position also requires tellers to be friendly and interact with the customers, providing them with information about customers’ accounts and bank services.

2. 3 Consumer Satisfaction

Consumer satisfaction can be defined as high quality. As Fournier and Mick (1999) state, consumer satisfaction is a fundamental marketing concept. High consumer satisfaction ratings are widely believed to be the best indicator of a company’s future profits (Kotler 1991). Consumer satisfaction can also defined as an evaluation based on the consumer’s experiences with a service provider over the period of time (Garbarino and Johnson1999). Consumer satisfaction usually use as a criterion for interpret product or service performance and it has been linked to overall firm performance. It is

well established that consumer satisfaction can affect customer retention and profitability (Anderson and Fornell 1994; Mano and Oliver 1993; Oliver 1993, 1997; Price, Arnould, and Tierney 1995; Reichheld and Sasser 1990). Consumer satisfaction is a main concept in modern marketing thought and practice. It is always as a primary objective to the managers. It also serves as a very important feedback mechanism for each organization. Moreover, consumer satisfaction may be affected by the interaction with technology or with the companies' staff. The marketing concept emphasizes delivering satisfaction (not just products) to consumers and obtaining profits in return. As a result, overall quality of life is expected to be better.

In this report, consumer satisfaction is conceptualized as overall satisfaction and is defined as an affective state or overall emotional reaction to a service experience (Amanda 2006). Assessments of overall satisfaction will be updated after interaction between consumer and the staff from the organization. It is important to identify the key drivers of this satisfaction assessment as they enable the managers to find out the relative importance of different components of the service (Garbarino and Johnson 1999). Thus, the organization can focus on those which are the most importance to consumers by identifying these components with the objective to improve overall satisfaction.

2. 4 Consumer Commitment

Consumer commitment plays a central role in relationships. As Scanzoni (1979) stated " commitment is the most advanced phase of partners' interdependence". Consumer commitment can be defined as an essential ingredient for successful long-term relationships which is similar to trust.

Commitment is also recognized as “ an enduring desire to maintain a valued relationship” (Moorman, Zaltman, and Deshpande 1992). In previous study, it is agreed that mutual commitment among partners in business relationships produces fateful benefits for companies. Organization can improved product developments, increase margins and market shares, and gain profit. Distributors gain deeper market penetration and higher customer satisfaction. Commitment is a central concept in the relationship marketing paradigm (Dwyer et al., 1987). The conceptualization of commitment stems from industrial/organizational psychology and has been viewed as an intention to continue a course of action or activity (Fehr, 1988). Commitment in the buyer-seller relationship literature is defined as “ an implicit or explicit pledge of relational continuity between exchange partners” (Dwyer et al., 1987). It can also define as psychological attachment to an organization (Gruen et al. 2000). Commitment is seen as a sentiment that is critically important in the development of long-term channel relationships or as a favorable affective reaction (Kumar et al., 1995). Therefore, commitment is a psychological sentiment of the mind through which an attitude concerning continuation of a relationship with a business partner is formed (Martin Wetzels 1998). Commitment is just like a force that binds an individual to a course of action of relevance to one or more targets (Meyer and Herscovitch 2001). And this force refers to different psychological state that reflect the nature of the individual’s relationship with the target of interest and that have implications for the decision to continue that relationship (Meyer and Allen 1997). This psychological state can be classified as three components: Affective commitment, Continuance commitment and Calculative commitment.

2. 41 Affective Commitment

According to Martin Wetzels (1998), commitment is an affective state of mind an individual or partner has toward a relationship with another individual or partner. This kind of commitment is called affective commitment. Affective commitment is brought about by a person sharing, identifying with, or internalizing the values of the organization (Morgan and Hunt, 1994). Affective commitment is based on a sense of liking and emotional attachment to the partnership. (i. e. employees stay with the organization just because they want to). Affective commitment is a desire-based attachment to the organization. Moreover, it is the most effective for developing and maintaining mutually beneficial relationships between partners (Kumar et al., 1994). Affective commitment has strong positive influences on: performance; desire to stay in a relationship; intention to stay in a relationship; and willingness to invest in a relationship. Besides that, it was found that it has strong negative influences on: opportunistic behavior; and development of alternatives for a relationship. It just like a psychological force that is affective and binding the consumer to the service provider out of desire in nature.

2. 42 Continuance Commitment

Continuance commitment defines as a constraint-based force binding the consumer to the organization out of need. It means that consumer stay with a service provider because they feel they have to. It reflects a sense of being “locked in” to the service provider (Meyer and Herscovitch 2001).

Continuance commitment is also similar to “constraint-based” relationship in which consumer believe they cannot end a relationship because of economics, social or psychological costs. On the other hand, continuance

commitment is a cost-based attachment where an employee feels he or she has to stay with the organization (i. e. employees remain with the organization because they need to). It just like a psychological force that is normative and binding the consumer to the service provider out of perceived obligation in nature. Continuance commitment is associated with the perceiver cost associated with discontinuing a course of action (Meyer and Herscovitch 2001). It is also associated with the perception that there is a lack of alternatives available (Meyer and Allen 1997). For example, if the cost of switching are high or if the consumer perceives that there are few alternative providers available, then this continuance force (constraint-based) occurs and binding the consumer to the service provider out of need. As the switching cost like" time, effort or money increase, consumers are more likely to perceive that they are " locker in" to their service providers, which in turn results in them being less likely to switch service providers. Alternately, to the extent that other service providers are perceived to be attractive, consumers are less likely to feel " locker in" with their existing service provider, which increase the possibility of switching.

2. 43 Calculative commitment

Calculative commitment was negatively influenced by trust (Geyskens and Steenkamp, 1995). Calculative Commitment is conceptualized as the amount of effort put in the process of calculating costs and benefits of a relationship. It seems that if partners in a relationship trust each other more they are more emotionally involved and less consciously weighing the benefits against the costs of that relationship. The other view sees commitment as being more behavioral than affective. This form is referred to as calculative

commitment and stems from a cognitive evaluation of the instrumental worth of a continued relationship with the organization. All gains and losses, plusses and minuses or rewards and punishments are added up (Morgan and Hunt, 1994). Geyskens et al. (1996, p. 304) define commitment as the perceived need to “ maintain a relationship given the significant anticipated termination or switching costs associated with leaving”. Calculative commitment is an obligation-based attachment to the organization (i. e. employees stay with the organization just because they ought to - the “ right” thing to do). It just likes a psychological force that is continuance and binding the consumer to the service provider out of need in nature.

2. 5 Conceptual Framework

It is necessary to develop a conceptual framework in order to study relational commitment and its relationship with various antecedents and consequences. Consumer satisfaction is a fundamental marketing concept (Fournier and Mick 1999). As mentioned in previous chapter, Consumer satisfaction is conceptualized in this study as overall satisfaction. As well as assessing consumer satisfaction, it is essential to identify the key drivers of this satisfaction assessment as they enable managers to ascertain the relative importance of different components of the service (Garbarino and Johnson 1999). These components are being identified and managers are able to focus on those primary importances to consumers, so as to improve consumer satisfaction. Furthermore, some specific service problems could be able to pinpoint by focusing on those specific components. In an example, consumer may satisfy with three or four attributes but dissatisfied with the performance of one or two attributes. An assessment of consumer

satisfaction cannot detect in this situation. It has important effect as a diagnostic tool for the organization.

The essential of service attributed has been point out in previous study by a numbers of authors. Moreover, the relationship of these attributes between consumer satisfactions has been found in previous studies (Voss, G., Parasuraman, A. and Grewal, D. 1998). The service organization (service provider) could understand more on the affective and cognitive assessment of the service encounter by investigating the consumer satisfaction and service attributes.

“ Trust may be perceived as the most important attribute for a mechanic” or “ empathy may be a key attribute for a doctor to exhibit” by Amanda Beatson 2006. Different industries may have different attributes which are more important to that industry. In this study, attributes may also differ between two service-delivery mode (SST and personal service usage). That can explain different elements become more important when presented with different service-delivery modes. The outcome of self-service technology may be more important (e. g. the speed or convenience of the SST) whereas the manner in which a service is delivered from the staff may be more important when using personal service (e. g. the friendliness of staff). As a result, the service-delivery modes are described as separate constructs in this conceptual framework. In current report, both attributes for SST and personal service usage are very important. There are many examples of these attributes: attributes for SST include self-service save time, self-service convenience, self-service fast respond, etc; attributes for personal service include: professional service, prompt service, reliable service, etc.

2. 6 Hypotheses

Same to previous study by (Meuter 2000), this report is hypothesized that direct relationships exist from the attributes of the two service-delivery modes (self-service technology and personal service usage) to the overall consumer satisfaction. It can be assumed those consumers are more likely to be satisfied overall with the complete service experience if they rate the performance of the various components of the service positively. Therefore, it shows that an overall evaluative judgment is made based on the individual elements that contribute toward this overall judgment. For example: based on the important components of the SST which the consumer feel, if the consumer is satisfied with the performance of the SST, they are presumable to be satisfied with the overall service as well. Hence, when performance on SST attributes have high rates, consumers are more likely to be satisfied with the total service. As a result, the first hypothesis is suggested to be:

H1: Self-Service Technology (ATM) attribute will have positive impact on consumer satisfaction

Similarly, based on the important components of the personal service which the consumer feel, if the consumer is satisfied with the performance of the personal service, they are presumable to be satisfied with the overall service as well. Hence, when performance on personal service attributes have high rates, consumers are more likely to be satisfied with the total service.

Therefore, the second hypothesis is suggested to be:

H2: Personal Service Usage (Teller) attribute will have positive impact on consumer satisfaction

As Garbarino and Johnson (1999) mentioned that consumer satisfaction can be linked with consumer commitment. In the previous chapter of literature

review, it is proposed that consumer commitment in this study is conceptualized as a multidimensional construct with three dimensions; affective commitment, continuance commitment and calculative commitment. Affective commitment is conceptualized as a consumer desire to continue the relationship with an organization because of a positive attitude toward the organization. Continuance commitment can be defined as the longevity of consumer's commitment to the organization, or expectations of continuity (Garbarino and Johnson 1999). Calculative commitment is that the consumer stays with or leave the organization depends on the existence of perceived costs which can be economic or psychological in nature (Morgan and Hunt 1994).

It is reasonable to assume that there are important relationship in between satisfaction and all three dimensions of commitment. For example, if consumers satisfy with the overall service, it is perceived that they are likely to feel a positive attitude toward the organization and want to continue to return to the organization because they like to. This suggests that consumer satisfaction leads to affective commitment.

H3: Consumer satisfaction will have positive impact on Affective Commitment

Similarly, if consumers satisfy with the overall service, it is perceived that they will want to go back to that same service provider when they want the service again. This suggests that consumer satisfaction leads to continuance commitment.

H4: Consumer satisfaction will have positive impact on Continuance Commitment

Likewise, if consumers satisfy with the overall service, it is perceived that they will not leave that service provider as the costs to join new organization or elsewhere maybe too high and need to spend time and effort to find another one. This suggests that consumer satisfaction leads to calculative commitment.

H5: Consumer satisfaction will have positive impact on Calculative Commitment

As explored in this study, it is hypothesized that a direct relationship exists between service attributes and those three commitment (affective, continuance and calculative). In the same way that SST attribute and personal service attribute were proved to relate to consumer satisfaction, and so it can also be assumed that they will relate to the commitment dimensions. For example, if consumers have a positive feedback with the SST attributes or the personal service attributes that are important to them, consumers will have more positive feedback toward the organization and wish to return. Thus SST attributes and personal service attributes are suggested and contributed to affective commitment. Likewise, if consumers have a positive feedback with the self-service technology attributes or the personal service attributes that are important to them, consumers are likely to return to the service provider in future. This shows that self-service technology attributes and personal service attributes are suggested and contributed to continuance commitment. Equally, if consumers have a positive feedback with the SST attributes or the personal service attributes that are important to them, consumers may not wish to leave the

relationship with the organization as the cost is too high and they may feel they have invested in that relationship. Therefore, it shows that SST attributes and personal service attributes are suggested and contributed to calculative commitment. Finally, it is hypothesized that:

H6: Self-Service Technology (ATM) attribute will have positive impact on Affective Commitment

H7: Self-Service Technology (ATM) attribute will have positive impact on Continuance Commitment

H8: Self-Service Technology (ATM) attribute will have positive impact on Calculative Commitment

H9: Personal Service Usage (Teller) attribute will have positive impact on Affective Commitment

H10: Personal Service Usage (Teller) attribute will have positive impact on Continuance Commitment

H11: Personal Service Usage (Teller) attribute will have positive impact on Calculative Commitment

Chapter 3

Research Methodology

In this chapter, it will focus on the Methodology of this research project.

Research setting will be discussed in the first part. Then data collection will then follow to define how to gather data information for the survey method.

Besides, a brief introduction of the questionnaire will also show in this

chapter including pre-test and the structure of questionnaire. Lastly, data analysis will be presented how to analyze the obtained data.

3.1 Introduction

The research method of this paper will be introduced in this chapter. The background of the research method and advantages will be discussed. The analyzing method will also be explained in the last part of this chapter.

Same to the title of this report, the target of this study is to determine consumer satisfaction and commitment through SST and personal service usage. In order to fulfill the target of this study, ATM has been selected as the subject of this case study.

In this report, the first step that is to determine the research method and survey has been chosen in this study. On the other hand, SPSS is chosen to help analysis the survey result and take further study on the data. Secondly, it is essential to set up the Conceptual Framework and Hypotheses which related to the literature review in the previous chapter. Thirdly, research setting and data collection will be study and then follow up by develop the questionnaire with the response scale and data analysis.

3.2 Research Setting

With the literature in the previous chapter, the aim of this report is to determine consumer satisfaction and commitment through SST and personal service usage. There is a trend especially in bank service that, front-line staff of traditional teller is being replaced by SST i. e. ATM. However, some service in some organization have found that is difficult to introduce SST to their

service because of lack of human interaction, while still keeping personal service to maintain service quality.

The research setting for this report was all people in Hong Kong. This report is looking for a wide range of respondents in the survey such as bankers, students, workers, etc... Moreover, this report will focus on the consumer satisfaction and commitment of ATM and teller. There are many reasons that ATM and teller was selected in this report. Firstly, ATM is the most classic example of SST as mentioned in previous chapter. While ATM is the classic example of SST, and it is belong to the bank service, so teller is the appropriate example of personal service in this report. Secondly, ATM was traditionally classified as a high contact services with a high degree of personalization. Beside that, teller is particularly important in bank service for determining consumer satisfaction and consumer commitment.

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