Chapter: 2

Literature Review
2.1 – Services

Berry (1980), defines services as a ‘deed, act or performance’. If there is an entity which is providing the service then, Lovelock (1983) suggests that it gives rise to two fundamental questions regarding this provision. First, toward whom or at what is the performance directed? Second, does the performance have a tangible or an intangible influence on the receiver?

Lovelock (1983) provides explanation to the above questions by stating that either the performance can be directed toward a person or their possessions/assets. Second the performance can be directed toward a person’s physical being or toward the tangible aspects of the assets of a person, or else they could be mentally stimulating for the person (intangible) or have an intangible impact on the assets of the person. This can be explained with the help of the following grid (Table: 2.1):

<table>
<thead>
<tr>
<th>Impact</th>
<th>Tangible</th>
<th>Intangible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>Haircutting, Surgery</td>
<td>Broadcasting, Education</td>
</tr>
<tr>
<td>Possession/Asset</td>
<td>Gardening, House Cleaning Services</td>
<td>Investment Banking, Civil Engineering Consultants</td>
</tr>
</tbody>
</table>

Table: 2.1 - Christopher H. Lovelock: Classification of Services

Sometimes the provision of services is not in a watertight compartment and may spill-over in other categories as well. For example while educating a student, it is also important to provide them with an ergonomically suitable environment, so that they
are comfortable and can concentrate on what is being taught. In this case both tangible and intangible provisions are being delivered. Similarly, when an investor invests in a Gold Exchange Traded Fund, the Asset Management Company not only provides management of investment, but also holds physical units of Gold bullion in their stock on behalf of the investor (Lovelock, 1983).

However, it should be noted that though there may be a secondary act in the service, but the core service performance will be confined to one of the four above stated services.

2.1.1 – Service Encounter

Prior to the advent to technology in the field of service provisioning, all service encounters were events with an employee and a customer as the participants. Therefore, an extant literature is available focusing on the interpersonal interaction between the firm employee/service provider and the customer (Bitner et al., 1990; Mohr and Bitner, 1995; Price et al., 1995; Solomon et al., 1985; Surprenant and Solomon, 1987). Most of these researches have assessed the two-way interaction between the provider and the customer, influenced by their personalization and resulting into a certain level of customer satisfaction. There have also been studies on the customer to customer interactions in service settings (Grove and Fisk, 1997; Martin and Pranter, 1989). Further, there have also been studies on interpersonal dynamics from the point of view of service recovery encounters and their impact on the satisfaction level of the customer with the service (Smith and Bolton, 1998; Tax and Brown, 1998; Tax et al., 1998). These studies have had a primary focus of interpersonal settings and the situational determinants of the satisfaction level of the customer availing the services. Whereas the focal point of this project is to investigate the factors associated with the technology based self-service events, where the
customer independently produces a service and the major onus of the satisfaction level achieved through the provision of the service lies on the customer themselves.

2.1.2 – Self-service Technologies

We have already examined that there is a large amount of research literature available on the dynamics of interpersonal interactions between service providers and customers (Bettencourt and Gwinner 1996; Bitner et al., 1990; Clemmer and Schneider 1996; Fischer, Gainer, and Bristor 1997; Goodwin 1996; Goodwin and Gremler 1996; Hartline and Ferrell 1996; Rafaeli 1993). However, the literature investigating customer interactions with technological interfaces is just starting to build (Bitner et al., 2000; Davis, 1989; Dabholkar 1996). The growing popularity coupled with continuing proliferation of SSTs demands that more research needs to be undertaken on the topic that extends beyond the interpersonal dynamics of service encounters into this technology-oriented context. This suggestion is being made because nearly half of all cash and cheque deposit related transactions are happening without the assistance of bank staff. Secondly, where some of the banking SSTs are highly celebrated and common, example ATM, other banking SSTs are being introduced and adopted by consumers with enthusiasm, example Net-banking (Dabholkar 1996; Gibson 1999; Merrill 1999). This is also evident that these technological innovations will not fade away and in the long-run will continue to be critical to the customer-firm interaction for high customer interface industries like banking. At this point we must be present to the idea that SSTs are creating a fundamental shift in the nature of services and thus it is significant for marketers to create a clear understanding in this area (Parasuraman 1996). To further our understanding, we explore SSTs to identify the factors that affect the adoption and
use, the derived satisfaction and the consumer behaviour toward these technology based self-service options.

We have established that there are two kinds of entities who may avail services from a person, another person or their assets. Now, we would like to take the discussion on a different tangent, where technology and not a person are utilized to provide services. When you go to a high-end shopping mall and use the escalator to take you from one floor to another, who is providing the service of transportation to you? Was their another person to help you in availing this service through the escalator? Technologies that customers independently use without any interaction with, or assistance from, employees to fulfil service requirements are called self-service technologies or SSTs (Meuter et al., 2000). SSTs are of many kinds and are utilized by an array of industries to serve both end-use customers as well as business customers.

In the same vein Vargo and Lusch (2004) argue that physical goods are valued for the services they provide, also called derived service. They suggest a new dominant logic for marketing where products should be promoted with the concept of the service they can provide. Because, unless a product is providing the desired service, it is redundant and if it is only the service that matters then why shouldn’t organisations promote their products for the services that the product is providing.

With the reinforcement of the concept that entities provide services to other entities and people we move to the introduction of SSTs in the banking sector. Technology based self-services have seen an unprecedented growth around the world and in various service industries. Banking has been in the forefront of this advantage (Bobbitt and Dabholkar, 2001). Self Service Technologies (SSTs) enable consumers to perform services for them, quickly and conveniently. The banking industry has
three major SSTs namely, Automated Teller Machines (ATM), Telephone Banking and Internet Banking (Meuter, 2000). With the advent and explosive growth of mobile telecommunication, a fourth banking SST has also evolved – Mobile Banking. These SSTs have become significant enough for the banks to position them as elements of competitive advantage and features of differentiation (Devlin, 1995). Some 25 years ago SSTs were viewed as labour saving technologies for both, the customer and the bank; however, now ATMs are used to advertise loans, phone banking CSEs sell mutual funds and internet banking is used to take feedback on latest services offered by the bank. Thus SSTs have become critical to the functioning of a bank and reflect their strategic intent (Lawrence and Karr, 1996).

A growing stratum of researchers is recognising and working toward the examination of critical importance of technology in the delivery of services (Bitner et al., 2000; Dabholkar 1994, 1996; Parasuraman 1996; Quinn 1996). Rayport and Sviokla (1994, 1995) suggest that the traditional marketplace interaction is being replaced by a market-space transaction. The market-space is defined as "a virtual realm where products and services exist as digital information and can be delivered through information based channels" (Rayport and Sviokla 1995, p. 14). This new phenomenon has radically redefined the foundation of customer-company interactions. Self-service technologies are a sub-set of market-space transactions in which no interpersonal contact is required between the buyer and the seller. Several studies have been undertaken which involve the development of user profiles of SSTs (Bateson, 1985; Darian, 1987; Eastlick, 1996; Greco and Fields, 1991; Langeard et al., 1981; Zeithaml and Gilly, 1987). For example, an investigation was attempted to segment markets on the basis of willingness to participate actively in the delivery of services (Langeard et al., 1981). The study was able to infer that consumers who
engage in self-service delivery options belong to the segment with characteristics of being younger, single, and better educated and have a lower income level. However, the point to be noted here is that this research was conducted more than 30 years ago. Another similar study was conducted around the same time, with a focus on comparing the choice between a self-service option and an interpersonal service delivery system (Bateson, 1985). The study revealed that the attractiveness of self-service options was strong enough for the respondents to opt for self-service delivery option even when the usual monetary or time-saving incentives were controlled and finds that a significant group of people choose to use a self-service option even without monetary or time-saving benefits.

Both of these early studies by Langeard and colleagues (1981) and Bateson (1985) make no distinction between technology-based self-service scenarios and more labour-intensive self-service situations. It is likely that the technological aspect of many recent self-service options has a unique influence on consumer perceptions of these self-service encounters. Researchers continue to be interested in how attitudes toward technology may influence the extent to which consumers interact with technology-based products and services (Dabholkar 1996; Parasuraman 1998; Raub 1981).

Bobbitt and Dabholkar (2001) explore factors such as attitudes toward technology based self-service systems and a need for interaction with service employees and their moderating effect on attitudes, intentions and thus the behaviour of consumers toward these service options. We shall discuss this framework in detail in the subsequent sections.
The significance of SSTs can be described through their features as defined by Zeithaml and Bitner in their book: *Services Marketing – Integrating Customer Focus across the Firm* (2000):

- Active Customer Participation
- Convenience
- Customized Service
- Low Cost
- Wide Distribution
- Price Competition
- Lack of Consistency in customer involvement
- Modification of Consumer Behaviour
- Concern with security

These characteristic features are associated with critical advantages to the banks. Transaction cost of SSTs is estimated to be $\frac{1}{6}$th of manual transactions (Kalacota and Freire, 1997). Moreover, since there is greater reliance on technology than on manual processing of transactions, the efficiency is enhanced due to reduction in heterogeneity of the service output (Zeithaml and Bitner, 2000; Lee and Allaway, 2002). Additionally, through SSTs, banks are able to reach out to customers who would otherwise be difficult to access due to the high fixed cost structures in the banking industry, and customers are able to access banks from remote locations, and can be provided services at their doorstep (Riivari, 2005).

SSTs provide advantages not only to the banks but also to customers. Customers can access the banks services from wherever they want and whenever they want (Bitner *et al.*, 2000). Various other advantages have also been pointed, such as: ease of use, convenience, time savings, cost savings, control over service provision, and even
entertainment from the use of technology (Curran and Meuter, 2005; Ho and Ko, 2008).

However, SSTs don’t come without challenges. There are certain challenges that both banks and customers have to face. Zeithaml and Gilly (1987) point out that for a certain class of customers, dealing with bank employees is a social encounter and they would prefer to deal with people rather than machines. For some customers, technology and insecurity as an outcome of technological dealings gives rise to anxiety and stress (Mick and Fournier, 1998). Because of these drawbacks, it has been observed that on many occasions, customers have to be motivated to use the SSTs, which might translate into costs (Gronroos, 1990).

Even though we may contrast the advantages and disadvantages that SSTs offer, it has been established beyond doubt that SSTs help the banks improve service quality levels and stimulate favourable consumer behaviour (Al-Ashban and Burney 2001; Mols, 1998). This is because superior service quality leads to customer loyalty and thus favourable consumer behaviour (Rust et al., 1995; Zeithaml and Bitner, 2000; Zeithaml et al., 1996).

2.1.2.1 – Types of SSTs

In this research project we explore various SST options in the banking sector. Some are highly celebrated others at an infancy stage. Some directly connect the service provider to the consumer, for example ATM, others require a medium or services of other service providers like mobile banking or net banking. We shall further this discussion through an illustration of the various types of SSTs. In Table: 2.2 we present a conceptualization of present-day SST options, which is based the on work done by Meuter et al. (2000). The columns of the matrix represent the types of technologies companies are using to interface with customers in self-service
encounters. The rows of the matrix represent the purposes of the technologies from the customer perspective - what the customer can accomplish by using the technology.

<table>
<thead>
<tr>
<th>Interface</th>
<th>Telephone/Interactive Voice Response</th>
<th>Online/Internet</th>
<th>Interactive Kiosks</th>
<th>Video/CDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Customer Service</td>
<td>Transactions</td>
<td>Self-Help</td>
<td></td>
</tr>
<tr>
<td>- Telephone Banking</td>
<td>- Flight Information</td>
<td>- Telephone Banking</td>
<td>- Bill Payments</td>
<td>- Information Telephone lines</td>
</tr>
<tr>
<td>- Order Status</td>
<td>- Account Information</td>
<td>- Internet Purchasing</td>
<td>- Railway Booking</td>
<td>- Internet Information Search</td>
</tr>
<tr>
<td>- ATMs</td>
<td>- Railway PNR Status</td>
<td>- Bill payment using debit cards</td>
<td>- Tourist Information</td>
<td>- Distance Education</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>- Weighing Machines</td>
<td>NA</td>
<td>- Railway PNR Status</td>
</tr>
</tbody>
</table>

Table: 2.2 – Categories and Examples of SSTs in Use (Meuter et al., 2000)

2.2 – Consumer Behaviour

Notwithstanding the impact of banking SSTs on the consumer behaviour of banking customers, we first need to understand the concept of Consumer Behaviour itself. Through extensive literature review we have arrived at the following theory for the concept of Consumer Behaviour:

The behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs is called Consumer Behavior (Schiffman et al., 2010).

In order to assess consumer behaviour toward the services we need certain variables to evaluate the same. Six variables of consumer behaviour have been identified as (Zeithaml et al., 1996; Mols 1998):

- Satisfaction
- Propensity to Complain
- Sensitivity to Price
• Propensity to Change Providers
• Word of Mouth
• Intention to Repurchase

2.2.1 – Satisfaction: Several authors have pointed out that there exists a relationship between Satisfaction and consumer behavior (LaBarbera and Mazursky, 1983; Meuter et al., 2000; Bitner et al., 2000). Customer satisfaction is achieved through two major benefits of SSTs: customization of the service and convenience of being able to produce and consume the service as and when the customers need the services (Bitner et al., 2000). Use of internet banking is related to greater tying-up and loyalty toward the bank (Mols, 1998). On a different vein Meuter et al. (2000), suggest that malfunctioning of hardware and soft-ware that prompt the customer to use conventional modes of banking are related to significant levels of dis-satisfaction.

2.2.2 – Complaints: A dis-satisfied customer may approach the bank to complain. However, complaints are of two types – negative and positive. Singh (1998) suggests that negative complaints can be manifested in three forms:

• Voiced complaints
• Negative Word of Mouth
• Legal Action

Contrary to this several authors feel that complaints can be positive when they provide an opportunity for the bank to improve its service quality or/and constitute service recovery (Levesque and McDougall, 1996; Mols, 1998; Zeithaml et al., 1996). Richins (1983) arguing in the same vein, suggests that positive complaints not only help the banks in identifying the cause of dis-satisfaction for its customers and rectifying it but also provide an opportunity to turn a dis-satisfied customer into a satisfied one through service recovery.
2.2.3 – Price Sensitivity: Although we have established that the use of technology is more cost-effective, it is very interesting that research has proved that satisfied customers are actually less price sensitive (Fornell, 1992; Zeithaml et al, 1996). Probably because of the social class they belong to, but none the less, internet banking customers are found to be less price sensitive than their counter-parts not using the internet banking services (Mols, 1998). Gelzus Research (2003) carried out in Germany concluded that, because of the convenience and ease of access, customers in Germany were ready to pay a higher fees for Mobile Banking services.

2.2.4 – Propensity to Change Provider: SSTs act as a barrier to customer’s propensity to change providers (in our case banks) (Fornell, 1992). This is primarily because customers spend considerable time and energy in learning how to use a certain type of SST provided by a bank. Once they have become compatible with a technology, they are not very inclined to change it as they foresee that the same amount of time and energy would be consumed in relearning the new technology (Mols, 1998). In this context Ricard et al., (2001) argue that, since a customer gets used to a particular technology and its dispositions, they develop strong links with the provider and thus, SSTs render the customer more captive and less likely to turn to competitors.

2.2.5 – Word of Mouth: Fornell (1992) demonstrated that there is a positive correlation between customer satisfaction and positive word of mouth, which means that a satisfied customer is highly likely to show preference toward a service provider and recommend the provider to others. Several authors confirm the claims of Fornell (1992), by saying that there is a positive relation between perceptions of superior service quality and consumer recommendation to other potential customers (Parasuraman et al., 1988; Goode et al., 1996; Zeithaml et al., 1996).
2.2.6 – Repurchase Intention: Every organisation wants its customers to repurchase products and services from them. And it has been established that satisfied customers are more loyal and have greater repurchase intentions (Fornell, 1992; Mols, 1998; Zeithaml et al., 1996). In the context of banking industry, Mols (1998) demonstrated that satisfied customers were more likely to engage in positive word of mouth, demonstrate lesser price sensitivity and have a greater intention to repurchase a bank's products or services.

With the inception of the idea that there is an association of SSTs and Consumer Behaviour, we will investigate the implications of SSTs on performance of banking activities and success ratio of these activities in terms of customer usage and satisfaction and the latent Consumer Behaviour.

There has been extensive research to prove the dimensions and outcomes of interactions between service organisation employees and customers (Bettencourt and Gwinner 1996; Bitner, Booms, and Tetreault 1990; Clemmer and Schneider 1996; Fischer, Gainer, and Bristor 1997; Goodwin 1996; Goodwin and Gremler 1996; Hartline and Ferrell 1996). However, the amount of research that has happened on the interaction between technology-based self-service provision and customers is still demanding more investigation (Bitner, Brown, and Meuter 2000; Dabholkar 1996).

The variables discussed earlier regarding consumer behaviour toward services do not necessarily encompass self-service technologies. For the purpose of this study, to formulate an instrument to elicit response from respondents and analysis, we shall consult literature related to banking SSTs to derive factors that impact consumer behaviour toward banking SSTs.
2.3 – Impact of Banking SSTs on Consumer Behaviour

An extant literature can be found on how consumer attitude impacts consumer behaviour (Helgeson et al., 1984). Moving one step ahead, Korgaonkar and Moschis (1987) assessed consumer attitudes in relation to specific SSTs. They were able to conclude that certain characteristics of consumers, for example time consciousness, opinion leadership and high-tech inclination, have a positive impact on the consumer attitude toward videotex services, a technology-based self-service which was popular in the West during the early 80’s. Similar studies have predicted that, adoption of in-home shopping methods such as internet shopping are majorly an outcome of attitudes, needs, experiences and personal characteristics (Eastlick, 1993; Shim and Drake, 1990). In the same vein, Dabholkar (1996, 1992) found that a favourable attitude toward using technology in general will result in a favourable attitude toward SSTs.

Based on the above findings, Bobbitt and Dabholkar (2001) were able to create a model that integrates attitudinal theories to understand and predict the use of SSTs. They essentially incorporate aspects of several well-known attitudinal theories to provide a deeper understanding of consumer motivation and behaviour related to SSTs. Internet shopping is used as an example to illustrate the use of the model. However, the model is effectively applicable to all SSTs.

The Model is developed through the integration of five attitudinal theories (Figure: 2.1). The theories have been placed in five different continuums. Their convergence is described through their relation with the central Theory of Reasoned Action.
Testable research propositions are developed in each section. We shall now take each of the five theories to create an understanding of the Model, with the help of these propositions. For ease of understanding we shall consider banking SSTs to illustrate the validity of the Model along with the example of Internet Shopping Behaviour illustrated by Bobbitt and Dabholkar (2001).

Theory of Reasoned Action

P1: Attitude toward using the internet for shopping will have a direct, positive effect on intention to shop through the internet (Bobbitt and Dabholkar 2001). For our consideration, we may interpret the proposition P1 as: Attitude toward using banking
SSTs to avail banking services will have a direct, positive effect on the intention to use SSTs for banking purpose.

P2: Intention to shop through the internet will have a direct, positive effect on Internet Shopping Behaviour (Bobbitt and Dabholkar 2001). We may infer P2 as: Intention to avail banking services through SSTs will have a direct, positive effect on the Behaviour toward banking SSTs.

*Category based affect*

P3: Attitude toward using technology in general will have a direct, positive effect on attitude toward using the Internet for shopping (Bobbitt and Dabholkar 2001). P3 in our case infers that attitude toward using technology in general will have a direct, positive effect on attitude toward using SSTs to avail banking services.

P4: Attitude toward using direct marketing methods, a specialized form of self-service, will have a direct, positive effect on attitude toward using the Internet for shopping (Bobbitt and Dabholkar 2001). If there are non-technology based self-service options in banking, then the attitude toward these non-technology based self-service options will have a direct, positive effect on attitude toward using SSTs to avail banking services.

*Perceived behavioural control*

P5: Situational influence related to the Internet will have an indirect effect through perceived behavioural control on whether consumers actually shop on the Internet (Bobbitt and Dabholkar 2001). From the perspective of this research we may look at P5 as situational influences related to SSTs will have an indirect effect through the perceived behavioural control on whether consumers actually use SSTs to avail banking services. Specifically:
a. Technical difficulty in accessing the Internet will decrease consumer shopping on the Internet (Bobbitt and Dabholkar 2001); similarly, technical difficulty in accessing the technology based self-service will demotivate consumers from availing banking services through them; and

b. The slow loading of information will decrease consumer shopping on the Internet (Bobbitt and Dabholkar 2001); for our research this can be translated as – slow loading of information on the SST will preclude the consumers from using them.

P6: Situational influences related to the consumer will have an indirect effect through perceived behavioural control on whether consumers actually shop on the Internet (Bobbitt and Dabholkar 2001). Similarly, there can be incidence of situational influences related to consumer that may have indirect effect through perceived behavioural control on whether the consumer actually avails banking services through the SSTs. Specifically:

a. Personal inability to access the Internet will decrease consumer shopping on the internet (Bobbitt and Dabholkar 2001); From the perspective of this research, we may infer this statement as – Personal inability of the consumer to access the SSTs will demotivate the consumer to avail their banking needs through the SSTs and;

b. Less time available for shopping in general will increase consumer shopping on the internet (Bobbitt and Dabholkar 2001). Similarly, if a consumer does not have enough time to actually go to a bank branch to fulfil their banking requirements then they would switch to SSTs for the same.
P7: Situational influences related to traditional retail stores will have an indirect effect through perceived behavioural control on whether consumers actually shop on the Internet (Bobbitt and Dabholkar 2001). In the same vein, situational influences related to traditional branch banking will have an indirect effect through perceived behavioural control on whether consumer actually avails banking services through SSTs. Specifically:

a. The possibility of a crowded retail store will increase consumer shopping on the Internet (Bobbitt and Dabholkar 2001); similarly, the possibility of a bank branch being crowded will increase consumer’s usage of SSTs.

b. The unavailability of other shopping modes will increase consumer shopping on the internet (Bobbitt and Dabholkar 2001); if there are no other possible means of availing banking services then this would lead to increased use of banking SSTs; and

c. The unavailability of products locally will increase consumer shopping on the Internet (Bobbitt and Dabholkar 2001). The same effect can be explained with the example of banking. If there are no branches of the bank, then this will prompt the consumer to increase the use of SSTs.

Theory of trying

P8: The outcomes experienced from pursuing goals related to Internet shopping will have a direct effect on attitude (Bobbitt and Dabholkar 2001). Similarly the outcomes experienced from pursuing goals related to availing banking services through SSTs will have a direct effect on the attitude. Specifically:

a. Failure in trying to learn to use the Internet for shopping will have an unfavourable effect on attitude (Bobbitt and Dabholkar 2001); just like
failure to learn to use SSTs to avail banking services will have an unfavourable effect on attitude.

b. Success in trying to learn to use the Internet for shopping will have a favourable effect on attitude (Bobbitt and Dabholkar 2001); similarly, success in trying to learn to use the SSTs for banking purposes will have a favourable effect on attitude;

c. Unfavourable outcomes experienced as a result of using the Internet for shopping will have an unfavourable effect on attitude (Bobbitt and Dabholkar 2001); the same goes for banks, as unfavourable outcomes experienced as a result of using the SSTs for banking will have an unfavourable effect on attitude; and

d. Favourable outcomes experienced as a result of using the Internet for shopping will have a favourable effect on attitude (Bobbitt and Dabholkar 2001). For our project, we may look at it as - favourable outcomes experienced as a result of availing banking services through SSTs will have a favourable effect on attitude

*External Influences: perceived risk associated with the Internet/SST*

P9:

a. Consumers tend to associate higher financial, psychological, performance, and temporal risks with purchasing through the Internet than with shopping in retail stores (Bobbitt and Dabholkar 2001). Similarly, consumers tend to associate higher financial, psychological, performance, and temporal risks with using SSTs to avail banking services than with availing banking services from a bank branch.
b. Consumers tend to associate higher psychological and performance risks with acquiring information through the Internet than through other methods (Bobbitt and Dabholkar 2001). Just as they would associate higher psychological and performance risks with acquiring their bank account related information through the SSTs rather than through other modes.

c. Perceived risks associated with the Internet will have a direct negative effect on attitude toward using the Internet for purchasing or acquiring information (Bobbitt and Dabholkar 2001). Inferring the statement from the point of view of banks - Perceived risks associated with SSTs will have a direct negative effect on attitude toward using the SSTs for availing banking services or acquiring information about the consumer’s bank account.

External Influences: factors associated with the product category/type of banking service

P10: Factors associated with the product category will moderate the effect of attitude toward using the Internet for shopping on intention to shop through the Internet (Bobbitt and Dabholkar 2001). Similarly, factors associated with the type of banking service to be availed will moderate the effect of attitude toward using SSTs to avail the required banking services. Specifically:

a. Products in high-risk categories (example very expensive, technologically complex, or socially important products) will have a negative moderating effect on the attitude-intention link as relates to purchasing (Bobbitt and Dabholkar 2001); just as banking services which involve high-risk (large amounts of funds, procedurally complex, or having effect on consumer’s
credibility) will have negative moderating effect on the attitude-intention link when the consumer wants to avail such services through SSTs;

b. Low consumer experience with a product category will have a negative moderating effect on the attitude-intention link for purchasing (Bobbitt and Dabholkar 2001); if there is a banking service, which the consumer has low experience of, then this would have a negative moderating effect on the attitude-intention link if the consumer has to avail the said service through an SST;

c. Intermediate levels of consumer experience with a product category will have a positive moderating effect on the attitude-intention link for acquiring information (Bobbitt and Dabholkar 2001); in the same vein, intermediate levels of consumer experience with a banking service will have a positive moderating effect on the attitude-intention link for acquiring information regarding that service through SSTs.

d. Low or high levels of consumer experience with the product category will have a negative moderating effect on the attitude-intention link for acquiring information (Bobbitt and Dabholkar 2001); whereas for banking low or high levels of consumer experience with the banking service will have a negative moderating effect on the attitude-intention link for acquiring information regarding the service through SSTs;

e. Products in search categories will have a positive moderating effect on the attitude-intention link for purchasing (Bobbitt and Dabholkar 2001); In same vein, for this project, services in search categories will have a positive moderating effect on the attitude-intention link for these services to be availed through SSTs.
f. Products in experience and credence categories will have a negative moderating effect on the attitude-intention link for purchasing (Bobbitt and Dabholkar 2001); in case of banking all services are experiences and some also come under the category of credence (investment advisory), however they are not apparently purchased. These services are availed through SSTs. If they were to be paid for specifically (Portfolio Management Services) then the consumer would have a negative moderating effect on the attitude-intention link for purchasing them through SSTs.

g. Products in experience and credence categories will have a positive moderating effect on the attitude-intention link for acquiring information (Bobbitt and Dabholkar 2001); very similar to banking where all services come under the category of experience and some services also come under the category of credence, find that consumers have a positive moderating effect on the attitude-intention link for acquiring information regarding them using SSTs.

h. Product categories with less information available on the Internet than elsewhere will have a negative moderating effect on the attitude-intention link for acquiring information (Bobbitt and Dabholkar 2001); banking services with less information available through SSTs than elsewhere will have a negative moderating effect on the attitude-intention link for acquiring information about them;

i. Product categories with more information available on the Internet than elsewhere will have a positive moderating effect on the attitude-intention link for acquiring information (Bobbitt and Dabholkar 2001); banking services with more information available through SSTs than elsewhere
will have a positive moderating effect on the attitude-intention link for acquiring information about them;

**Theory of reasoned action**

Fishbein and Ajzen (1975) proposed the theory of reasoned action, which is the best-known and widely supported attitudinal theory. This theory forms the core of the framework proposed by Bobbitt and Dabholkar (2001). The proposed framework specifically focuses on the link between attitude and intention and that between intention and behaviour.

**Influence of category-based affect**

Consumer's past attitudes and experiences are manifested in their judgements about new situations, products or services. Past behaviours can be distinguished on category-based affect, i.e. an affective association related to the category of behaviour (Fiske, 1982; Sujan, 1985). This essentially means that based on behaviour we may categorise consumers. Further this stored category-based affect is triggered by the right stimulus, in our case technology-based self-services. Therefore, when a consumer faces a new situation which is similar to a prior experience, a generalised attitude is displayed toward it to influence the consumer behaviour (Dabholkar, 1996, 1992; Ledingham, 1984; Dickerson and Gentry, 1983). In our case there are two ‘category-based affect’ of attitude that influences the attitude toward using SSTs. They are attitude toward using technology and attitude toward using self-service. Both represent the generalised attitudes that influence the more specific attitudes in the central Theory of reasoned action.

**Theory of planned behaviour**

By adding perceived behavioural control as a factor that can influence intentions and behaviours, the theory of planned behaviour extended the theory of reasoned action...
(Ajzen, 1991). “The perceived ease or difficulty of performing the behaviour of interest” is called Perceived behavioural control (Ajzen, 1991). In case of SSTs in the banking sector, if we take the example of a consumer withdrawing cash from an ATM, then the perceived ease or difficulty of withdrawing cash (behaviour of interest in this case) is the Perceived behavioural control. It is imperative to mention the application of Davis’s (1989) inferences regarding perceived usefulness and perceived ease of use as factors influencing adoption of technology, at this juncture.

There are three situational variables that relate to perceived behavioural control:

Situational influences related to SSTs will have an indirect effect through the perceived behavioural control on whether consumers actually use SSTs to avail banking services. Specifically:

a. Technical difficulty in accessing the technology based self-service will demotivate consumers from availing banking services through them; and

b. Slow loading of information on the SST will preclude the consumers from using them.

Situational influences related to consumer that may have indirect effect through perceived behavioural control on whether the consumer actually avails banking services through the SSTs. Specifically:

a. Personal inability to access the Internet will decrease consumer shopping on the internet (Bobbitt and Dabholkar 2001); From the perspective of this research, we may infer this statement as – Personal inability of the consumer to access the SSTs will demotivate the consumer to avail their banking needs through the SSTs and;
b. If a consumer does not have enough time to actually go to a bank branch to fulfil their banking requirements then they would switch to SSTs for the same.

Situational influences related to traditional branch banking will have an indirect effect through perceived behavioural control on whether consumer actually avails banking services through SSTs. Specifically:

a. The possibility of a bank branch being crowded will increase consumer’s usage of SSTs.

b. If there are no other possible means of availing banking services then this would lead to increased use of banking SSTs; and

c. If there are no branches of the bank, then this will prompt the consumer to increase the use of SSTs.

**Theory of trying**

Consequences of a particular kind of behaviour can influence attitudes toward trying to achieve a goal (Bagozzi and Warshaw, 1990) – these are insights provided by the theory of trying. It is an outgrowth of the theory of planned behaviour (Ajzen, 1991) and the theory of goal pursuit (Warshaw et al., 1991). The theory of trying (Bagozzi and Warshaw, 1990) suggests that rather than forming uni-dimensional attitudes toward actions, people form complex, multidimensional attitudes toward goals (example: learning to use a technology) (Ajzen and Fishbein, 1980).

Consumers may try to learn something about a new technology and if they fail, as a result of the failure they are not able to experience the outcomes (Bagozzi et al., 1992). For example, a consumer may want to use an SST because of their favourable attitude toward it, and may try to learn how to avail services through it. If the learning process is perceived to be tedious and frustrating or the consumer perceives that it is
too difficult to learn, then they may give up on trying learning and may never use the SST.

On the other hand if a consumer is successful in learning and implementing their learning to avail the services through a particular SST, then this would reinforce a favourable attitude toward using SSTs in general to avail services.

Therefore, the outcomes experienced from the use of SSTs to avail banking services could be favourable or unfavourable, and will affect previously held attitudes accordingly.

The outcomes experienced from pursuing goals related to availing banking services through SSTs will have a direct effect on the attitude. Specifically:

a. Failure in trying to learn to use SSTs to avail banking services will have an unfavourable effect on attitude;
b. Success in trying to learn to use the SSTs for banking purposes will have a favourable effect on attitude;
c. Unfavourable outcomes experienced as a result of using the SSTs for banking will have an unfavourable effect on attitude; and
d. Favourable outcomes experienced as a result of availing banking services through SSTs will have a favourable effect on attitude

Other external influences

These influences include direct and moderating variables that influence attitude and/or behaviour related to technology-based self-service. The direct influence is caused by the perceived risk associated with the SST. The moderating influence on the attitude-intention relationship is caused by factors associated with the type of banking service the consumer is availing. For example the risk associated with a third party money
transfer through and ATM would be higher than withdrawing cash from the same account using the same ATM.

**Direct Influences**

- Consumers tend to associate higher financial, psychological, performance, and temporal risks with using SSTs to avail banking services than with availing banking services from a bank branch.
- Consumers associate higher psychological and performance risks with acquiring their bank account related information through the SSTs rather than through other modes.
- Perceived risks associated with SSTs will have a direct negative effect on attitude toward using the SSTs for availing banking services or acquiring information about the consumer’s bank account.

**Moderating Influences**

Factors associated with the type of banking service to be availed will moderate the effect of attitude toward using SSTs to avail the required banking services. Specifically:

- Banking services which involve high-risk (large amounts of funds, procedurally complex, or having effect on consumer’s credibility) will have negative moderating effect on the attitude-intention link when the consumer wants to avail such services through SSTs;
- If there is a banking service, which the consumer has low experience of, then this would have a negative moderating effect on the attitude-intention link if the consumer has to avail the said service through an SST;
- Intermediate (neither to low, nor too high) levels of consumer experience with a banking service will have a positive moderating effect on the
attitude-intention link for acquiring information regarding that service through SSTs.

d. Low or high levels of consumer experience with the banking service will have a negative moderating effect on the attitude-intention link for acquiring information regarding the service through SSTs;

e. Services in search categories will have a positive moderating effect on the attitude-intention link for these services to be availed through SSTs.

f. In case of banking all services are experiences and some also come under the category of credence (investment advisory), however they are not apparently purchased. These services are availed through SSTs. If they were to be paid for specifically (Portfolio Management Services) then the consumer would have a negative moderating effect on the attitude-intention link for purchasing them through SSTs.

g. All services that come under the category of experience and some services also come under the category of credence; find that consumers have a positive moderating effect on the attitude-intention link for acquiring information regarding those services using SSTs.

h. Banking services with less information available through SSTs than elsewhere will have a negative moderating effect on the attitude-intention link for acquiring information about them.

i. Banking services with more information available through SSTs than elsewhere will have a positive moderating effect on the attitude-intention link for acquiring information about them.
An observed draw-back of the Model created by Bobbitt and Dabholkar (2001) is that it takes no reference of the celebrated literature created by Davis (1989). However, it still manages to fill various gaps in consumer theory related to SSTs.

From the perspective of the service provider, once an SST has been introduced, the reliance on company personnel is removed and the onus of service delivery, quality of deliverables and consumer satisfaction is shifted to the consumer (Curran and Meuter, 2005). This shift of transactional responsibility places more burdens onto the consumer. Therefore, where modifications in the service delivery are supposed to add value to customer service, they often increase work or require greater involvement on the part of the customer, when we consider SSTs. Similar factors may discourage the consumer from trying and using SSTs. Therefore, service providers must be present to the fact that once such a modification in instituted in the service delivery, there is a segment of consumers, who will choose not to enjoy the benefits that technology has to offer and may opt out of participating in the new service format (Langeard et al., 1981).

Service providers have obvious advantages of shifting services provision through technology; however, the same may not be the case with the consumers, who may not want to avail services through technology. Reduced costs in terms of costs saved on personnel, fixed costs or transactional costs and increased access to customers may motivate the service providers to transfer service delivery through SSTs. On the other hand for some consumers the provision of services though technology may be a stressor and a cause for anxiety, which may prompt them to remain with the conventional format of availing services (Mick and Fournier, 1998).

For some consumers the introduction of technology in the service provision may seem like a threat, as they may be unsure of how would they be able to resolve any
problems with the technological interface, in case they were to arise (Meuter and
Bitner, 1998). Further there is a segment of consumers, who treat services and
availing services as a social encounter and enjoy the human interaction along with the
service. For such customers, technology based services make no sense and they may
even ignore the existence of SSTs (Zeithaml and Gilly, 1987).

Certain set of consumers feel that the time and energy devoted to learning the new
technology and then switching to use it may not be worth-while and will continue to
avail the services in the conventional format (Gatignon and Robertson, 1991).

Even though we have discussed various factors which may preclude consumers from
using technology based services, the perceived benefits that arise out of SSTs are
enormous and pronounce the ever increasing popularity of their service provision
among various segments of consumers.

Whereas Davis (1989) becomes the seminal source of extant literature on the topic of
Technology Based Self Services or SSTs, various articles were examined to arrive at
an array of Endogenous and Exogenous factors that affect consumer behaviour toward
SSTs in the banking sector (Appendix – I, Table 1). (Berger, 2009; Bobbitt &
Dabholkar, 2001; Curran & Meuter 2005; Dabholkar, 1996; Kolodinsky et al., 2004;
Parsuraman 2000; Liljander et al., 2006)

The Endogenous variables identified through the review of literature are:

Attitude toward using SSTs (Dabholkar and Bagozzi, 2002)

Intention to use SSTs (Dabholkar and Bagozzi, 2002)

Perceived Usefulness (Davis, 1989)

Perceived Ease of Use (Davis, 1989)

Optimism (Liljander et al., 2006)

Innovativeness (Liljander et al., 2006)
Need for Interaction (Dabholkar and Bagozzi, 2002)

Risk Perception (Curran and Meuter, 2005)

We begin with the model developed by Berger (2009) (Figure: 2.2), to identify the first seven endogenous variables. The last variable, Risk Perception, is inducted from the model developed by Curran and Meuter (2005) (Figure: 2.3).

Berger (2009) develops upon Technology Acceptance Model (TAM) (Davis, 1989) and the theory of reasoned action (Ajzen and Fishbein, 1980). Various studies have been undertaken to derive frameworks for adoption of innovation using these two models (Lucas et al., 2007).

Benbasat and Barki (2007), point out that there are many derivatives and additions to the basic model derived in the seminal article by Davis (1989). One of the significant additions to the model was made by Parasuraman (2000) with his work on the technology readiness index (TRI) which identifies four dimensions of consumers’ attitude toward technology – Optimism, Innovativeness, Discomfort and Insecurity (Risk Perception).

When we consider SST supported transactions, there is a continuous movement in research to bring the TRI and TAM models together (Walczuch et al., 2007). The explication of the use of SSTs for airline ticket check-in with the help of TRI dimensions (Liljander et al., 2006). Meuter et al. (2003) and then the extension of the same study by Lin et al. (2007), impress upon customer satisfaction as an outcome of SST usage.

Although TRI propounds personality traits influencing the acceptance and adoption of technology, Dabholkar and Bagozzi (2002) and Bobbitt and Dabholkar (2001) draw out on a broader scope of traits and also provide a framework for situational factors
influencing the adoption. Schepers and Wetzels (2007) on the other hand emphasise on moderating effects within the TAM derived models through their meta-analysis.

![Conceptual model for moderating effects on SST adoption (Berger, 2009)](image)

The core attitudinal model is derived from Davis (1989), and Dabholkar and Bagozzi (2002). The ‘Optimism’ and ‘Innovativeness’ factors of ‘Moderating Effects’ is based on ‘Technology Readiness Dimensions’ (Liljander et al., 2006). The Relationship Characteristics (Scott, 2006), describe the Scope and Scale of the relationship with the bank and it’s Moderating Effects on the use of SSTs. The Social Needs Characteristics (Dabholkar and Bagozzi, 2002) provides the framework for ‘the need for interaction dimension’ and latent Moderating Effect that it has on the adoption and use of SSTs.

The ‘SST attitude/intention to use model’ (Curran and Meuter, 2005) proposes ‘Ease of use’, ‘Usefulness’, ‘Need for Interaction’ and ‘Risk’ as the Antecedent Belief that
influence the theory of reasoned action to create a framework for adoption and use of SST (Figure: 2.3).

![SST attitude/intention to use model (Curran and Meuter, 2005)]

We have already considered the first three factors; however, with the celebrity of the research, we cannot ignore the fourth factor, ‘Risk’.

The exogenous factors have been derived from two research papers Berger (2009) and Parsuraman (2000). The list of the endogenous factors and the related exogenous variables can be studied in the Annexure – I, Table: 1.