CHAPTER-2

REVIEW OF LITERATURE

2.0 E-BANKING & CUSTOMER SATISFACTION

In 2009, Hue did an experiment to find out users' perception about online banking whether it is exaggerated by the perceived smoothness by use of websites & the privacy policy which are made by the online banking system for website. In this study, the researcher also came out with the conclusion that the relative significance of apparent ease of utilization, preservation and security. However, it was found that professed ease of working is of less significant than the privacy and security of the system. The most significant factor was Security that influences user's acceptance. In 2011 Shah in his research revealed that Banking Needs, Core services, Convenience, hazard, safety and Privacy matters are the important factors for complete satisfaction of online or e-banking customers. On the other side, Feature accessibility and Consumer continuance were set up that moderately affected the customer satisfaction factor using online or E-banking services. With the objective to encourage customer satisfaction, it was predictable for all banks to give due distinction to all the above depicted factors. Kumbhar (2011) study showed that, customer demographics are the important factors which effect the customer satisfaction and adoption of E-banking services. According to his research, it was projected that the customers with high education, high income and young generation customer are more prominent users of e-banking as compared to other group. He also indicated that there was significant difference among customer satisfaction level of Public and Private Sector Banks services. The banks belonging to private sector provide improved and fast services leading to good service quality as compared to public sector banks. Nupur in 2010 did her research study to evaluate customer satisfaction in online banking in Bangladesh, in which she find out that there is a relation between customer satisfaction in E-banking and reliability, responsiveness, assurance, empathy, and tangibles. The study further indicates that the relationship
between banks and corporate customers is the most important factor in the success of any financial services.

Kadir et al. (2011) found that 3 dimensions of E-SERVQUAL models namely responsiveness, customization and flexibility are unable to respond customers’ need. Therefore, all the Banks should improve their customer service and smoothen their processing system which is depends on these dimensions in order to customer satisfaction. Kumbhar in 2011 performed a study to examine and studied the contribution of a variety of service quality dimensions in customers’ satisfaction. He found that all 13 variables were found significant and were good predictors of overall satisfaction in E-banking. Perceived value, Brand perception, ease of use, trouble shooting, Security implementation and receptiveness are imperative factors for measuring customer satisfaction in online banking system. The researcher in his study is also using this model for testing customer satisfaction in Delhi/NCR region.

Ahmad et al. (2011) investigated the factors that show significant impact on online banking. Safety, confidentiality and satisfaction are the factors that were having great impact on customer satisfaction. Also, it predicted that some other factors that influences of on satisfaction level. Musiime et al. (2011) also conducted a research to observe the association between e-banking service, Customer acceptance and his satisfaction. They pointed out that is a significant association between online banking & customer satisfaction level can be seen, whereas the bank was dedicated for providing the service to customer, lot of evidences can be seen, it was observed that the bank was capable to keep hold of the maximum number of users using the online banking service. Although in 2008 Tsung et al. has also explored all the factors that produce impact on customer satisfaction along with online banking. Based on survey, the results showed that ecological, managerial and global factors produce impact on customer satisfaction along with online banking appreciably. Sadegi et al. (2010) provided a seven factor model based on following dimensions: convenience, accuracy, accessibility, usefulness, security, and website design and bank image. These factors were determinants of customer perception in e-banking services. Raje, A and Khanna, V.T. (2012) pointed out that the online service quality
of banking functions, their outcome and dimension was dependent on kind of service, circumstances, time, requirement, safety and many more additional factors. Also e-service quality, as perceived by customers, was much more than having a state of the art websites. The result showed that dependability, website development, faith and receptiveness all produce impact on customer satisfaction on overall service quality. In addition, it was seen that customer satisfaction and the on the whole service quality is significantly connected to customer buy intentions. Motlaq et al. (2011) indicated that apparent status, apparent structural declaration and apparent readiness to modify to have significant relationship with electronic faith. A study by Zailani, S. et al (2008) finds that privacy, security, trust, convenience, and experience were the factors that influenced the customer perceptions on online ticketing based on the service quality analysis. Within the 5 factors, experience was the most significant to influence consumer perception on online ticketing service quality. In 2011, Lau et al., worked on enhancement customer purchase intention, he depicted to facilitate online stores ought to develop marketing strategy for improved address, website blueprint, declaration, easy to use, personalization & awareness, as all these factors considerably impact on customer satisfaction on online buy intention.

Presently, Indian banking is trying to deliver its banking services as per the world class banking services standards by adopting an advanced information technology. The Indian Banking sector is undergoing radical and drastic technological advancement phase. Information technology revolution has influenced and altered the every characteristic of human being along with banking (Siam, 2006). IT enables every industry including banking to deliver its services and products in a speedy and cost-effective way. IT has revolutionized banking operations by extending the benefits of Automatic Teller Machine, Telephone banking, mobile phone banking, internet banking, which allowing banks to offer its services through multiple delivery channels on a 24*7 basis (Chakrabarty, 2010). As a result of such vibrant, competitive, and dynamic business environment, the focus of banking services has been shifted from mass banking to customer centric banking by the help of various information technology resources (Walker et al., 2008). The Number of the banks is
now focusing on relationship banking with their customers. This new era of banking is known as E-banking. Online banking comprises of an arrangement of monetary dealings, once completed thru the substantial exchange of in sequence information, can now be performed electronically (Moutaz Abou-Robieh, 2005). ICT has totally changed the competitive landscape of Indian retail banking (Mittal and Dhingra, 2007). The factors which play very important role in e-banking are given below:

2.1 E-Banking and customer’s satisfaction

It is very difficult for the researcher to define customer satisfaction as it is very ambiguous and subjective concept. The level of satisfaction is varying from human being to other human being and from service to service. Satisfaction level is also influenced by number of the factors such as psychological, economic and physical factors. Customer satisfaction becomes a buzzword now. The present study is designed to measure the level of customer satisfaction of banks operating in India. Such type of measurement allows a company to find out the important factors that are responsible to create satisfaction and dissatisfaction. This satisfaction analysis will ultimately help to understand the key drivers which are actually responsible for customer satisfaction during a service experience. The Number of the researcher has defined a customer satisfaction concept in the literature. It is defined as the condition of brain that customers have because of feedback about that company when their probable expectations that have been met completely or extended with the existence of the merchandise product or banking service (Kevin Cacioppo, 1995). It is also considered as an expression of feeling or attitude for the product or service after it consumption. It has been seen to arbitrate changes among pre-exposure and post-exposure of other apparatus (Oliver, 1980). It is known as an important outcome of marketing and branding efforts, whereby it acts as a linkage among the various stages of the consumer buying behavior (Jamal & Nasser, 2002). Every customer has some expectation before consuming the services; such expectations might be in the form of promise superiority, fair price, accessibility, service after sale is accomplished, process of handling complaints, information & diversity etc, which
should be met during service delivery process (Aneja 1993). These expectations are generally arise from the company’s marketing and communication programs.

The customer satisfaction is also derived from the perceived value of service, which customers are getting from transactions or service encounter. If the perceived values are less than the money paid, it will result in the dissatisfaction. If the perceived values are equal as the price paid, it will lead to satisfied customers. On the other hand, if the perceived values are more than the price paid, it will result in over satisfied customers.

Several empirical studies revealed that a significant & positive association was observed between customer satisfaction and service quality. The study by Berry (1990) showed that customer satisfaction is derived through various factors prevalent. Rueangthanakiet Pairot, (2008) defined as customer satisfaction is also derived from the perceived value of service, which customers are getting from transactions or service encounter. If the perceived values are less than the money paid, it will result in the dissatisfaction. If the perceived values are equal as the price paid, it will lead to satisfied customers.

2.2. Customer Satisfaction

Customer Satisfaction is defined as fulfillment of needs of the customer; it is a collection of various parameters of satisfaction i.e. perception, quality of product or service, evaluation, consumer experience and his psychological reactions. Gustafson, A. et al. in year 2005, defined customer satisfaction as customer’s overall experience regarding service or product. In services industry; services quality factor directly impacts customer satisfaction. Feclikova I, in year 2004 interpreted customer satisfaction as a emotion that is the outcome of a processes of comparing between what was received and what was expected. Customer satisfaction is the success mantra of any organization. Jochen Wirtz in year 2003 has depicted the outcome of customer satisfaction by the factors i.e. customer repeat purchase of that product, his loyalty, his positive word-of-mouth for that company or product and this leads to increased profitability of the company. The
researchers have also identified some of the key indicators of customer satisfaction in banking sector.

On the other hand, Kotler (2000) defined “satisfaction as a person’s feeling of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations”.

2.3. Theories of Satisfaction

2.3.1 Transaction-specific and cumulative satisfaction

Some researchers have classified satisfaction concept into two aspects that are transaction-specific customer satisfaction and cumulative customer satisfaction (Yi and La, 2004; Parasuraman, Zeithaml and Berry, 1994; Cronin and Taylor, 1992). Transaction-specific customer satisfaction is a customer reaction and experience towards the process of service delivery or service encounter time. It is also known as post-choice evaluation of a specific purchase and consumption experiences. On the other hand, cumulative customer satisfaction is the evaluation of overall experience associated with a service (Smith et al 1998). Literature also suggested that companies focus should be on making customer satisfaction by different user friendly methods, along with transaction centric satisfaction, as earlier one has long term influence on consumer behavior, their repurchase intentions and loyalty (Homburg et al, 2005; Jones, and Suh, 2000).

Overall satisfaction also moderates the relationship between transaction-specific satisfactions and repurchases intention.

2.3.2 Confirmation and disconfirmation theory of customer satisfaction

This theory suggests that the customer satisfaction is determined by the differences between customer prior expectations about services and service perception (Khalifa and Liu 2003). According to this theory, satisfaction is the difference or gap between the expectation and perceived performance of service.
a. **Customers’ Expectations** are also known as a reference point or standards which generally used by customers for evaluating service performance and quality (Zeithaml and Bitner 2003). It can be defined as customers’ pretrial beliefs about a products or services (McKinney, Yoon and Zahedi 2002). Expectations usually arise prior to the actual delivery. In literature, five levels of expectation are identified by researcher which is known as-

- **Ideal expectations**
- **Normative “should” expectations**
- **Experience based expectations**
- **Acceptable expectations**
- **Minimum tolerable expectations**

b. **Customer’s perception** is one more important driver of customer’s satisfaction. Perceived performance is defined as customers’ perception of how a service performance fulfills their needs, wants and desire (Cadotte t al. 1987). Perceived service quality can be considered as customers’ opinion about service’s overall excellence or superiority (Zeithaml 1988). Customer Satisfaction is influenced by various factors such as perception of service quality, price, and other personal expectations for service delivery. Customers usually do the comparison of their expectation with the actual perception of service performance. Confirmation of expectations will lead to satisfaction, while disconfirmation of expectations may result in either positive disconfirmation or negative disconfirmation dissatisfaction. Disconfirmation can be defined as “a mental comparison of an actual state of nature with its anticipated probability” (Oliver, 1981). This theory is based on the assumption that customers make purchase decision with some prior consumption expectations. Then service encounter gives inputs to customers which will ultimately help them in building perceptions for service performance. After consumption, consumers evaluate their perceptions with
pre-expectations. If service performance meets the expectation, then this situation can be called as confirmation of expectation. Confirmation of expectations will lead to satisfaction, while disconfirmation of expectations may result in either positive disconfirmation or negative disconfirmation dissatisfaction (Oliver 1980, 1981; Tse and Wilton 1988). Positive disconfirmation is a state where performance exceeds the expectations which at last leads to over satisfaction. On the other hand, negative confirmation is a state where performance is below than the expected level, which will result in dissatisfaction. Smith and Houston (1982) suggested that satisfaction is not only related to confirmation or disconfirmation of expectations; it is associated with the size and direction of the disconfirmation experience. Thus, satisfaction also depends on consumer physical and mental status (Bateson, 2002).
Figure 2.1 : Process of Disconfirmation

2.4. Determinant of customer satisfaction

A number of studies have evaluated and satisfied a customer satisfaction model and its determinants with respect to online services.

2.4.1 Antecedents and customer satisfaction of cyber shopping store (CSS)

In 1999, Ho and Wu their study examined five antecedents related to the customer satisfaction of online services. In this theory, logical support represents a quick response to customer’s needs, quick delivery of service and after sale services. Technological factors include the latest and user-friendly software, operating system, and information system. Information factors indicate accurate information. Homepage presentation means ease to use interface. Product characteristics mean variety and low prices of services and products.

![Diagram of Antecedents and Customer Satisfaction Model](image)

Figure 2.2: A Research Model for the Antecedents and customer satisfaction of cyber shopping store (CSS) Source: Ho and Wu (1999)

2.4.2 DeLone & McLean IS Success Model (2003) for End User Satisfaction
In the context of online services, the computer users are customers or suppliers than front line personnel. In this channel, customers and suppliers use the computer system to take buying or selling decisions and perform business transactions. This model presents six important dimensions related to customer satisfaction with online services. This model suggests that system quality, information quality, service quality singularly and jointly influences the level of customer satisfaction. Here system quality means the characteristics of internet environment such as usability, availability, reliability, adaptability and response time. Information quality includes the web content which facilitates online transactions such as personalized, complete, relevant, and easy to understand, and secure information. Service quality represents the overall support provided by service provider.

![Diagram]

*Figure 2.3: DeLone & McLean IS Success Model*
A revised version of DeLone & McLean Information System Success Model was produced by Molla and Licker (2001). In this model, the system and information quality dimensions are replaced by E-commerce system and content quality. User satisfaction is also replaced by E-commerce satisfaction. In this model, two more dimensions i.e. trust and services are included to know the relationship between user and customer – e-commerce satisfaction.

**Table 2.1: Dimensions of DeLone & McLean IS Success Model**

_Sources: DeLone & McLean 2003_

<table>
<thead>
<tr>
<th>Dimensions of Success Model</th>
<th>Measurement variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>System quality</td>
<td>Adaptability, Availability, reliability, response time, usability</td>
</tr>
<tr>
<td>Information Quality</td>
<td>Completeness ease of understandings, personalization, relevance, security</td>
</tr>
<tr>
<td>Service quality</td>
<td>Assurance, empathy, responsiveness</td>
</tr>
<tr>
<td>Use</td>
<td>Nature of use, navigation patterns, number of site visits, and number of transactions executed.</td>
</tr>
<tr>
<td>User satisfaction</td>
<td>Repeat purchases, repeat visits users surveys</td>
</tr>
<tr>
<td>Net Benefits</td>
<td>Cost savings expanded markets, incremental additional sales, reduced search costs, time savings</td>
</tr>
</tbody>
</table>

**2.4.3 E–commerce Success Model for E-commerce Customer Satisfaction**

A revised version of DeLone & McLean Information System Success Model was produced by Molla and Licker (2001). In this model, the system and information quality dimensions are replaced by E-commerce system and content quality. User satisfaction is also replaced by E-commerce satisfaction. In this model, two more dimensions i.e. trust and services are included to know the relationship between user and customer – e-commerce satisfaction.
2.4.4 The model For Expectation- Disconfirmation Effects on Web- customer satisfaction (EDEWS)

DeLone and McLean (1992), Spreng et al. (1996) and McKinney et al. (2002) suggested the customer satisfaction with online purchasing depends on the excellence of website’s information content imparted to customer and website’s system performance. This level of customer satisfaction is also influenced by the pre
expectations and possible differences between expectations and the perceived performance of the website. According to disconfirmation theory of customer satisfaction. Consumer Satisfaction mainly has three main factors which are depicted in past researches i.e disconfirmation, user expectations, and apparent performance. In the context of online services, we can call it information quality expectations, quality of Information, disconfirmation, and information quality perceived performance. In the same way, web-service quality satisfaction has three antecedents,

- System Quality Expectations
- System Quality Disconfirmation
- System Quality- Perceived performance.

In their study, they have identifies five dimensions related to the Information quality.

These are relevance, timeliness, reliability, scope and apparent usefulness of the system.

Relevance – It is defined as the characteristics like relevancy, unambiguousness, and honesty of information imparted.

Timeliness- It represents the continuously updated information.

Reliability- it is the correctness, reliability and steadiness of information.

Scope- It is concerned with the level of detailed information given by the website.

Perceived usefulness- It is the users’ evaluation of all possibilities that the knowledge imparted to customer will increase their purchasing decision.
Figure 2.5: The model for Expectation- Disconfirmation Effects on Web-customer satisfaction (EDEWS) Source: McKinney et al. (2002)

Eastin (2002) proposed the model that explained the acceptance of 4 e-commerce actions. These are online shopping, e-banking, e-investing & electronic payment system for online services. This model demonstrates that apparent expediency & monetary repayment, risk handling. The use of the telephone banking for a performing banking related transactions, self efficiency & internet usage is producing significant influence on the acceptance process.
2.5 SERVICE QUALITY AND CUSTOMER SATISFACTION

In the literature, several attempts have been made by researchers to define service quality, but still it is abstract and ambiguous concept due to the uniqueness of services like intangibility, heterogeneity, and inseparability of production and consumption (Parasuraman, Berry, & Zeithmal, 1985). Parasuraman et al. (1988) defined service quality as “the difference between customer expectations of what a firm should provide (i.e. expectations) and the perceived service performance”. Asubonteng, McCleary, & Swan (1996) stated that “Service quality is the difference between customers’ expectations for service performance prior to the service encounter and their perceptions of the service received”. According to American
Customer Satisfaction Index (ACSI) relation between expectations, perceived value and customer satisfaction is given in figure -.

![ACSI Model of Customer Satisfaction](image)

**Figure 2.7: ACSI Model of Customer Satisfaction**

Source- Adopted from American Customer satisfaction Index (ACSI)

Yasin, Correia, & Lisboa (2004) considered service quality as an important asset of organisation. According to them “Service quality is viewed as an organizational asset and a key determinant of corporate marketing and financial performance”. In the literature, several models were developed by researcher to compute or determine service quality. However, broadly we can classified these models into two main concepts, of which first is the disconfirmation, an instrument that is used to calculate dissimilarity among Perception & user expectation, and second is performance approach, an instrument to calculate mere perception. Researchers have broadly utilized both the factors for the measurement of service quality. For the measurement of service quality the gap model was proposed by Parasuraman, Berry, & Zeithmal (1985). According to this model service quality, can be defined as the differences between expectations and performances along the quality dimensions. They proposed five different gaps of service quality which may lead to the poor service quality.
2.5.1 GAP 1 difference between consumer expectation and management perception

Gap 1 exists where the management is not able to identify the actual need of customers. This type of situation can be occurred due to several reasons like lack of marketing research practices, wrong interpretation of the customer's expectations, and too many management layers in the organization between front line staff and top management.

2.5.2 Gap 2: between management perception and service quality specification

Sometimes despite having good understanding of customer expectations, management is unable to convert that expectation into setting service quality specifications. The key reasons for this gap can be inadequate planning, the absence of management commitment, vague service design, and Unsystematic new service development process.

2.5.3 Gap 3: between service quality specification and service delivery

This gap is the difference between the service quality specification and actual service delivery. This gap may occur due to the untrained or poorly trained front line personnel, role ambiguity, role conflict, ineffective internal marketing, failure to match demand and supply and lack of proper customer education and training.

2.5.4 Gap 4: between service delivery and external communication

Sometimes there is a difference exist between what organization was communicated to its customers and what is actually being delivered. The variation among actual service & the promised service may take place because of over-promising during outside communication movement, breakdown to deal with customer expectations, & the disappointment to carry out as per specifications.
2.5.5 Gap 5: between expected service and experienced service

Gap 5 is the overall difference in consumers’ expectations and perceptions.

In addition to these gaps, authors also suggested 10 factors which may manipulate the emergence of gap such as organization competence, courtesy, credibility, security, access, knowing the customer, tangibles, reliability, and responsiveness (Parasuraman, Zeithml and Berry, 1985, 1988). They have also suggested five important factors that are related to quality of service provided are named as reliability, receptiveness, assurance, empathy and tangibility. These are also known as “RATER”.

- Reliability
- Assurance
- Tangibles
- Empathy
- Responsiveness

To measure the above defined gaps, researchers have also developed a questionnaire called SERVQUAL which calculate both service quality and customer expectations along with other five factors, and customer perception for kind of service quality they receive from bank. This questionnaire measures service quality from 22 questions on a scale of 1 to 7. The gap score is computed difference between the Expectation score and the Perception score. The Negative score represents the low service quality. Nyeck, Morales, Ladhari, and Pons (2002) defined SERVQUAL as a most absolute instrument to conceptualize & calculate service quality. This questionnaire has been used widely by service organizations like healthcare, banking, financial services, and education.

The present study has depicted that customer satisfaction is directly proportional to the outcome of purchase done by customer and the use of the product results in
satisfaction parameter. The comparison of the expenditure with the benefits from the view of customer expectations and actual performance shown or performed by the product purchased is satisfaction (Anderson et al., 1994).

Figure 2.8: GAP MODEL
2.6. BRAND REPUTATION, BRAND PERCEPTION, AND CUSTOMER SATISFACTION

According to American Marketing Association a brand is a name of product, its term, the design and many other types of features which highlights seller’s product or the service provided as different from the product of other sellers. The branding is an effort to create brand positioning in consumers’ mind. The Brand reputation can be defined as how a particular brand (whether for an individual or a company) is viewed by others. It refers to perception of service quality linked with the brand’s name. In the literature, brand reputation in the banking sector is banks reputation & making place by any bank in the existing banking industry (Che-Ha and Hashim, 2007 Reynolds, 2007). A positive brand reputation indicates the consumers trust in your company, a negative reputation means mistrust on company. Several studies have shown a positive linkage between brand image, brand reputation and customer satisfaction (Wafa et al 2009). Woodruff et al. (1983) stated that brand reputation has an important impact on customer satisfaction and customer loyalty.

2.7. E-BANKING CUSTOMER SATISFACTION

Nowadays, managers and researchers have been continuously debating the role of e-banking service in customer satisfaction and e-banking quality issues have become an area of interest for research (Jayawardhena, 2004). We can easily classified toady’s banking customers into two broad categories. The first category which is still using the traditional approach to consume banking services known as offline customers. On the other hand, the second category which has already adapted itself according to the new era of electronic commerce & e-marketing, known as “online customers or e-customers”. In the literature, e-customers are defined as “an individual or corporate one who are using e-portals to purchase, ordering, receiving information and paying price / charges of services/product purchased through various types of e-channels.

The review of the literature has clearly depicted that customers’ satisfaction, loyalty, retention and purchase derision are significantly influenced by the service quality.
The e-services quality, the price and the process of e-purchasing play a significant role in determining the level of customer satisfaction (Ming Wang, 2003). The number of studies has explained various factors associated with e-customers satisfaction (Chen and Chen, 2009). Among all explored factors in literature, technological factors are found to be significant in determining the level of satisfaction (Schaupp and Bélanger, 2005).

The other study conducted by Adam (2004) identified nine key factors during pre-purchase activity and nine factors in post-purchase phases to determine the level of satisfaction named as Web design, price, promotion, merchandise availability, on-time delivery, met expectations, return policy, customer service and order tracking. Schefter and Reichheld (2000) stated that e-satisfaction is derived from the attitude of consumer towards service quality with respect of customer support, on-time delivery, forceful merchandise product presentation, suitable and rationally priced transport & management, absolutely clear & truthful privacy policies.

Marcel Gommans, et al. (2001) in his study explored the relationship among electronic satisfaction, electronic banking quality and electronic loyalty. The regression analysis indicated that e-customers loyalty is explained by the banks website & the technology adopted by the bank like speed of operations, ease to perform various functions, many personalized features, layout of website, language used as user interface, searching option provided, reliability of service, website content, fast shopping checkout, value proposition, easy payment and other customized products for the customers. Anderson and Srinivasan (2003) also made an attempt to explore the linkage between e-satisfaction and e-loyalty. They defined customer Satisfaction as the summary of psychological state resulting and e-satisfaction is the contentment of the customer with respect to his or her prior purchasing experience with a given electronic commerce firm.

Cho Yoon, and Joseph Ha (2008), examined the influence of e-banking advertisement on the level of customer satisfaction. The finding of study suggested information factor, convenience factor, technology factor, community factor,
entertainment factor, price factor and brand name factor as important factors related to satisfaction of e-customers.

Taylor and Hunter (2003) have categorized factors associated with customer satisfaction into satisfiers (attentiveness, responsiveness care and friendliness as the main sources of satisfactions) and dissatisfiers (banking services, and integrity, reliability, availability and functionality) category. The present study conceptualized “e-satisfaction as the outcome of consumer perceptions of online convenience, trust, security, customization, usability, easiness, price effectiveness and perceived value”.

2.8. E-BANKING SERVICE QUALITY MEASUREMENT

Literature shows a clear linkage between customer satisfaction and service quality. This section of literature is focused on the review of a variety of scales and magnitude of e-banking service excellence that has been proposed by various researchers. For the first time, Perceived Service Quality Model was developed by Gronroos (1984). This model emphasized on the three dimensions which include functional service quality, corporate image, technical service quality, professionalism, attitude and behavior, skill utilized, system flexibility, system reliability and trustworthiness, service recovery and bank reputation and its credibility. After that, Cronin and Taylor (1994) developed a “SERVFERF” instrument to measure service performance along with reliability, responsiveness, assurance, empathy and tangibles dimensions on seven-point Likert scale. “SERVFERF” instrument has been proved superior over SERVQUAL by various researchers as it measures only perception to avoid the problem of an unambiguous expectations measure (Kumar 2008; Godwin et al, 2008). “SERVFERF” also showed high convergent and predictive validity as compared to SERVQUAL. Akiran (1994) also developed an instrument called “BANKSERV” with the slightly different construct. The main constructs are polite, greet, help, promptness, neatness, apology, concern, mistake, security, informed, advice, learn, know, teller and staff number.
To measure the service quality with respect to e-banking, “WebQual” instrument was developed by Loiacono, Watson and Goodhue (2000). This instrument is based on the following constructs: Information fit to task, interactivity, trust, responsiveness, design, intuitiveness, visual appeal, innovativeness, websites flow, integrated communication, business process and viable substitute, accessibility, speed, navigability and site content. The website quality also plays a significant role in e-banking services. Yoo and Donthu (2001) developed a scale called “SITEQUAL” to assess the website quality on the basis of ease of use, aesthetic design, processing speed, and security dimensions. For evaluating the quality of software used in e-banking service, Yang and Zhang (2009) developed an instrument called SOFTWARE Quality on the basis of nine constructs. These constructs are completeness, security, adequacy, simplicity, self-descriptiveness, functionality, reliability, facility, and efficiency.

Zeithaml, Parasuraman, and Malhotra (2000) also modified the construct of SERVQUAL with respect to E-banking and developed a new instrument called e-SQ or e-SERVQUAL. The main constructs of this scale are efficiency, reliability, fulfillment, privacy, responsiveness, compensation, and contact. In 2005, they had retested the validity of the same instrument and added one more system availability construct. Nadiri, et al (2009) designed an instrument on the basis of Desired, adequate, predicted and perceived service quality dimensions.

2.9 E-BANKING SERVICE QUALITY AND E-SATISFACTION MEASUREMENT

Jun and Cai (2001) has done research for find out the key factors associated with e-banking service quality. As a result of content analysis, they have identified seventeen factors named as reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, collaboration, continuous improvement, content, accuracy, ease of use, timeliness, aesthetics, security and divers features. The finding of the study indicated that some dimensions like responsiveness, reliability and access are crucial for both traditional and e-
banking. With the help of factor analysis, they have again divided these seventeen factors into three dimensions, which are *customer service quality, online systems quality* and *banking service product quality*. The same study also showed that there is no significant difference between Internet-only banks and traditional banks offering Internet banking service.

**Broderick and Vachirapornpuk (2002)** in their study emphasized the role of customers in e-banking service quality in UK. The qualitative finding revealed that the level and nature of customer participation in service delivery has the significant influence on the zone of tolerance, and expected and perceived service quality. The study also identified key dimensions related to the quality of e-banking such as reliability, efficiency, responsiveness, assurance, ease of use and information.

![Figure 2.9: Preliminary Model of Perceived Service Quality in Internet Banking](image)

**Source:** Broderick and Vachirapornpuk (2002)
In his study, Jayawardhena (2004) adapted the construct of the SERVQUAL instrument in the context of e-banking and develop a questionnaire of twenty-one items for measuring the service quality in e-banking. As a result of exploratory factor analysis and confirmatory factor analysis, researcher reduced twenty-one items into five e-banking quality dimensions and named as access, website interface, trust, attention, and credibility. Han and Baek (2004) also modified SERVQUAL instrument with respect to the service quality of e-banking. Data were collected through the online survey. Through exploratory and confirmatory factor analysis, the study proposed a four-factor model of SERVQUAL including Tangibles, Reliability, responsiveness, and Empathy. The same study, also explored the linkage between customer satisfaction, customer retention, and service quality.

Yang et al. (2004) made an attempt to design reliable and valid scale to measure quality of e-banking by integrating theory of customer service quality, information systems quality, and product portfolio management, into e-banking service quality. By doing a content analysis of 848 customer reviews of online banking services and personal interview, web-based survey questionnaire was designed to test the online service quality model. A confirmatory factor analysis identified six important e-banking service quality dimensions: reliability, responsiveness, competence, ease of use, security, and product portfolio.

A user-based service quality model for e-banking was also proposed by Liao and Cheung (2005). The questionnaire was designed on the basis of individual perceptions with respect to service quality in e-banking. The responses were collected from 500 respondents in Hong Kong on a seven-point Likert scale ranging from “strongly disagree” to “strongly agree”. The empirical results of the study showed that perceived usefulness, ease of use, reliability, responsiveness, security and privacy, and continuous improvement of e-banking services have a significant impact on customer attitudes for E-banking. One more research was conducted by Noel et al. (2005) in Hong Kong to find out the linkage between e-banking service quality, customer satisfaction, and future consumption behavior. The study adopted the four dimensions (credibility, efficiency, problem handling, and security) of e-
banking service quality from e-SERVQUAL instrument developed by Zeithaml et al. (2002). Among four dimensions, except security all three were found to be significant predictors in determining overall service quality perceptions in e-banking while credibility, problem handling and security have significant influence on customer satisfaction and future consumption behavior.

Akiran, (2002) also has studied the relationship between the credibility of staff and service quality of banking services. For measuring the service quality, he adopted the six constructs (empathy, responsiveness, staff conduct, access, communication, and reliability) from BANKSERVE model of Akiran (1994). The research conducted by Sohail and Shaikh (2007) showed that e-banking service quality is significantly and positively influenced by “efficiency and security”, “fulfillment” and “responsiveness”. Shergill and Li Bing (2006) explored the relationship between trust and loyalty with respect to e-banking in New Zealand Banks context. The service quality was measured on the basis of six dimensions i.e. trust, brand reputation, switching cost, shared value, communication, and opportunistic behavior control. The data analysis revealed shared value as a most relevant variable in explaining trust. The study concluded that trust and brand reputation can be improved by improving customer satisfaction and service quality of banking services.

Wu et al. (2008) assessed the quality of e-banking with respect to information gap, design gap, and fulfillment gap by using ZPM E-Service Quality Model. All three gaps were found to be significant to determine the website quality. In addition to this, the study also identified eight key dimensions labeled as "efficiency", "reliability", "privacy", "compensation", "responsiveness", "contact", "sense of beauty" and "individualization", are associated with the quality of e-banking.

Loonam and O”Loughlin (2008) conducted a qualitative research to identify the customer perceptions regarding e-banking in Irish. The finding of study suggested ten key e-service quality dimensions in the context of e-banking. These dimensions are web usability, security, information quality, access, trust, reliability, flexibility, responsiveness, service recovery, and personalization or customization. Khan et al.
(2009) investigated service quality of E-banking services in India. The result of the study explored seven key quality dimensions with the help of principle component factor analysis. The seven quality dimensions are reliability, accessibility, user friendliness, privacy/security, efficiency, responsiveness, and fulfillment. The study also found gender as a significant predictor for evaluating service quality of e-banking. The result of regression analysis showed that out of seven, reliability, accessibility, privacy/security, responsiveness and fulfillment as important dimensions for evaluating the service quality from customers’ point of view. They also stated reliability as an important dimension compared to “User-friendliness”.

Ho and Lin (2009) also designed a multiple items scales for evaluating the e-banking service quality in the context of Taiwan. Confirmatory factor analysis indicated the high reliability and validity of the questionnaire. The analysis suggested five dimensions of service quality which was labeled as customer service, web design, assurance, preferential treatment, and information provision by authors.

Sadeghi and Farokhian (2011) used technology acceptance model (TAM), the theory of reasoned action (TRA), and theory of planned behavior (TPB) to develop a service quality model for e-banking services. The principle component analysis suggested seven following dimensions: Convenience, accessibility, accuracy, security, usefulness, bank image and website design for measuring service quality.

Nadiri, et al (2009) examined the relationship between the age of customers and their zone of tolerance with respect to banking services in Turkey. The zone of tolerance was measured by using BANKZOT service model i.e. “desired level” ‘adequate level” ‘predicted level” and ‘perceived level” of service quality. The finding of the study indicated a huge gap with regard to tangibles and empathy dimensions of banking service quality. Young consumers were found to be more promising customers segment associated with e–banking services.

One more study in Turkey was conducted by Pinar et al (2010) to identify the most promising of improvement in bank service quality with the help of Mystery shopping method. They have compared the service quality of Turkish state- owned
with private and foreign banks. High service quality and a high level of consumer satisfaction were found to be associated with foreign banks services, while, poor service rating was associated with state-owned banks. Hence, state-owned was advised to improve its service in all dimensions of service quality. The result shows that foreign banks are offering the best service quality bank services than Turkish private and state-owned banks.

Shamdasani, et al (2008) tested the research question that “if consumers are highly satisfied with the quality of self service banking, so why banks branches are increasing in recent years?” To test this hypothesis, they have identified the antecedents and consequences of service quality to predict customer satisfaction with internet banking the finding of this research suggested that quick delivery, reliability and enjoyment also have a significant impact on service quality.

Cockrill, et al (2009) examined the role of perceived risk and trust in influencing the level of customer satisfaction with e-banking and concluded that both factors have a significant impact in determining the level of customer satisfaction for ATMs. In addition, results also indicated that security does not have direct role in determining customer satisfaction.

Choudhury and Koushiki (2007), assessed the link with service quality and customer satisfaction in the context of Indian e-banking with the help of SERVQUAL methodology. Yu, Chian-Son (2008), also conducted a study to evaluate service quality of internet banking industry in Taiwan with the help of SERVQUAL. Kannabiran, and Narayan, (2005) mentioned that the emergence of new private-sector banks, expansion by the foreign banks, the changing business model of the nationalized banks compounded by the financial sector reforms. Internet banking has comprehensive features and functionality offered by Internet banking enabled the bank to provide world-class customer service, at the same time improving efficiency and reducing the cost of operations. As per their review the banking system has to meet the requirements of urban India, where Internet has become a way of life, particularly among the professionals and employees in technology
companies, all of whom have easy access to the Internet at their workplace and, in most cases, from their homes as well.

2.10 RESEARCH GAP

From above literature review it has been highlighted that online banking or Internet banking has made banking much easier for its customers in the recent past. Online banking can provide a reliable service to the customers which make them happy. Online service quality is one of the key determinants of the success of online banking. This exploratory study is done to explore the important findings about online service quality. Most of the research was undertaken in foreign countries, this study is done in Delhi NCR to find out the customer satisfaction level in this part of Country. This study also finds out the difference in satisfaction level in Indian and Foreign Banks. So the following objectives has been formulated

2.11 OBJECTIVES OF THE STUDY

The present study aims at the following objectives:

1. To study the effect of demographic variables on various factors leading to satisfaction.

2. To investigate the factors influencing the level of Satisfaction of E-banking customer.

3. To compare and analyze the Customer Satisfaction level in E-banking services of Indian and Foreign Banks.

4. To find out Strength and Weakness dimensions of E-banking in Indian and Foreign Banks as perceived by customers.

5. To provide recommendations to policy makers for improving service delivery in E-banking.