CHAPTER 2

REVIEW OF LITERATURE

2.1 INTRODUCTION

This chapter presents the review of literature. An overview of service quality, use of technology and productivity is given followed by a review of studies made about service quality, use of technology and productivity in Airlines services. The present study aims at modeling the relationship between Productivity, Use of Technology and Service quality among Indian airline service providers. To this end a review of literature is vital to gain insight into the theories related to Service Quality, Productivity and Use of Technology and also into various research work that have been done on Airline services. Hence literature review is done to clarify and bring out the factors relating to Productivity, Use of Technology and Service quality the said three among Indian airline service providers.

2.2 REVIEW OF LITERATURE ON SERVICE QUALITY

Disconfirmation occupies a central intervening variable in the study of Service Quality. Disconfirmation arises from discrepancies between expectations and actual performance. It is presumably the magnitude of the disconfirmation effect that generates satisfaction and dissatisfaction (Churchill and Surprenant 1982, Oliver and DeSarbo 1988, Tse and Wilton 1988). Oliver (1980) stresses the importance of measuring disconfirmation apart from expectation and its additive effect on satisfaction. Swan (1977)
found that satisfaction was related to the disconfirmation of expectations. He also found that both disconfirmation and expectation are significant predictors of satisfaction and that satisfaction predicts intentions. Swan and Trawick (1980) examined the influence of perceived performance on disconfirmation and satisfaction. They found disconfirmation to be strongly related to performance, as is satisfaction. Churchill and Carol Suprenant (1982) stated that the majority of the disconfirmation paradigm holds that satisfaction is related to the disconfirmation experience, where disconfirmation is related to expectation. More specifically they state that the full disconfirmation paradigm encompasses four constructs, expectations, performance, disconfirmation and satisfaction.

The expectancy disconfirmation paradigm in customer satisfaction literature posits that customer results in large part from the disconfirmation of prior expectation. That is, if the performance of a service provider meets or exceeds expectations, then the customer is more likely to be satisfied. If the performance fails to meet expectation, then the customer is more likely to be dissatisfied.


Therefore, customers are asked for levels of agreement with statements involving perceived and ideal service performance. These levels of agreement are termed, perceptions and expectations, respectively. Subtracting the perception minus the expectation yields a gap, which is conceptually
similar to disconfirmation. Expectation and perception are usually linked via the disconfirmation measure service quality gap or a direct disconfirmation measure, the structure of the analysis remains essentially the same (Rust et al 1995).

Parasuraman et al (1985) were among the earliest to study Service Quality and they defined Service Quality as an overall evaluation of service and a summary evaluation of the components of service. Also, they stated that Service Quality results from customers’ comparisons of their expectations about a service encounter with their perceptions of the service encounter. Teas (1993) defined Service Quality as the consumer judgment about the excellence or superiority of a service provider’s performance. Parasuraman et al (1988) further defined perceived service quality is defined by as “a global judgment, or attitude, relating to the superiority of the service”. Later, Boulding et al (1993); Bolton and Drew (1991); Cronin and Taylor (1992) agreed to the above definitions of service quality.

Later, Taylor (1993) said that a firm’s strategy for success requires developing high-order and specialized core competencies. Vargo and Lusch (2004) identified these core competencies as knowledge and skills, which enable the firm to establish, develop, and maintain mutually beneficial relationships with customers. Vargo and Lusch (2004) further stated that as a consequence of this, there is an increasing emphasis on service quality rather than manufacturing quality, regardless of the industry.

In this highly competitive global market, service providers are primarily focused on delivering superior service quality to achieve high levels of customer satisfaction. Spreng and Mackoy (1996) and Shemwell et al (1998) emphasized the importance of service quality and customer satisfaction in their research works. Bitner and Hubert (1994) stated that the
customer perceptions of service quality will vary at every level in the organization.

Keaveny (1995) and Parasuraman et al (1996) have logically endeavored to draw a link between Service Quality and relevant behavioral intention such as customer retention or switching intention. Most of the efforts to identify a link between Service Quality and intentional consequences of Service Quality emanate from social psychology which asserts that there exists a causal link between attitude toward an object and intention regarding behaviour towards that object.

Berry et al (1985); Johnston and Lyth (1991); Sasser et al (1978); Fitzgerald et al (1991); Collier (1991); Juran et al (1988) Have all agreed that service quality in most cases depends on a number of factors or aspects. Parasuraman et al (1985) identified ten determinants, namely reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the consumer, and tangibles. Later Parasuraman et al (1988) the identified ten determinants were reduced to five, namely, tangibles, reliability, responsiveness, empathy and assurance. Grönroos (1989) added a sixth dimension recovery to these five. This refers to having a clear-cut strategy for removing the unwanted elements of service offer to the satisfaction of the consumer.

However, various researchers have reported that their research do not support these dimensions. Finn and Lamb (1991) while researching on retailing negated the Parasuraman et al’s claim that their instrument is applicable to a wide range of services. They concluded that the five dimensions are insufficient to measure service quality in the retail setting. Cronin and Taylor (1992) while researching for services like banks, dry-cleaning, etc. found little support for Parasuraman et al’s five dimensions.
Silvestro and Johnston (1989); and Fitzgerald et al (1991) in their studies, enlarged Parasuraman et al’s efforts by redefining some of the previous dimensions and enlarging this list to as many as 15 factors. They caution against relying exclusively on the market (or consumers) to determine all the key attributes of service quality. Thus, they maintain that due attention to the specific tasks of operations is also desirable.

Juran et al (1988) identified three aspects of services that should be measured: timeliness, consumer well being, and continuity of services. Collier (1991) identified the following service quality attributes: accuracy, volume and activity, convenience, time-oriented responsiveness, reliability, professionalism and competence, friendliness and consumer empathy, atmosphere and aesthetics, security and safety, productivity and efficiency, overall market and performance indicators, technology, and price/value/cost/relationships.

Armistead (1990) classified the service dimensions as ‘soft’ and ‘firm’. The style (attitude of staff, accessibility of staff, and ambience), steering (the degree to which customers feel in control of their own destiny) and safety (trust, security and confidentiality) are the soft dimensions whereas; time (availability, responsiveness and waiting), fault freeness (in physical good, intangible activities and information) and flexibility (recovery, customization and augmented services) are the ‘firm’ dimensions.

Figini (2003) stated that Service quality and customer satisfaction can be evaluated according to different methods: by asking customers their perception/satisfaction on service quality, expectation/importance, or both perception and expectation; in addition, perception can be compared with the zone of tolerance of expectations (the range defined by the maximum desired level and minimum acceptable level of expectations).
Methods of measuring service quality can be identified in two different categories. The first category includes techniques of statistical analysis, such as quadrant and gap analysis, factor analysis, scatter graphs, bivariate correlation, cluster analysis, and conjoint analysis. Some of these techniques provide an evaluation of the service attributes; others provide the relationship of the service attributes with overall satisfaction. Various authors have introduced some indices for measuring overall satisfaction or service quality. These techniques have been discussed in detail by Kano et al (1984), Zeithaml et al (1986), Berger (1993), Akan (1995), Cuomo (2000), Hill (2000, 2003), Bhave (2002) and Hartikainen et al (2004).

The second category of methods consists in the estimation of coefficients by modeling. Here models are used that relate global service quality (dependent variable) to some attributes (independent variables). Some of these models are regression models, structural equation models (SEM) (Bollen 1989) and Logit models. Examples of SEM are reported in Vilares and Coelho (2003) and Grønholdt and Martensen (2005); an ordinal regression technique was proposed by Siskos et al (1998).

In the Handbook for Measuring Customer Satisfaction and Service Quality, published by the US Transportation Research Board, the ‘impact score’ technique is described (TRB, 1999), while a linear regression model was proposed by Jones (Swanson et al 1997).

The treatment of ‘quality’ as a kind of attitude is well accepted by market researchers (see Holbrook and Corfman 1985, Parasuraman et al 1985, Olshavsky 1995). Moreover, much research (Sasser et al 1978, Gronroos 1982, Lehtinen and Lehtinen 1982, and Parasuraman et al 1985) unambiguously confirms the notion that service quality, as perceived by the consumer, stems from a comparison of what they feel companies do offer (i.e. their perceptions) with their expectations of what the firms should offer.
Parasuraman et al (1985) devised a gap model of service quality based on this research, and defined perceived service quality ‘as the degree and direction of the discrepancy between consumers’ perceptions and expectations’. The gap model predicted that perceived service quality could be determined by the measurement of the difference between consumers’ ratings of the perceptions of service quality (P) and their expectations of service quality (E) calculated as Service Quality = P – E. This gap score was evaluated in accordance with a disconfirmation paradigm: if P is greater than E, this is considered to be a ‘positive disconfirmation’; and if P is less than E, this is a ‘negative disconfirmation’.

As outlined previously, Parasuraman et al (1988) based the development of the scale on the concept of perceived quality, related but not equivalent to satisfaction that results from the comparison of expectations with perceptions. Cronin and Taylor (1992, 1994) argued that despite a general reluctance of market researchers, perceived quality is best conceptualized as an attitude (this position is also supported by Oliver 1980). Consequently, according to Cronin and Taylor, the use of an expectation-disconfirmation model as the basis for SERVQUAL is not appropriate. An attitudinal model of service quality should be used instead. This view is also adopted by Iacobucci et al (1994, p. 14) who argued that ‘in some general psychological sense, it is not clear what short-term evaluations (of quality and satisfaction) are if not “attitudes”’.

Cronin and Taylor (1992) concluded that conceptual advances suggest that the disconfirmation-based SERVQUAL scale is measuring neither service quality or consumer satisfaction and that ‘marketing’s current conceptualisation and marketing of service quality are based on a flawed paradigm’. Andersson (1992) criticised the failure of Parasuraman et al (1988) to use economic, statistical and psychological theory to inform the
development of SERVQUAL. This criticism was made on three grounds. The first was that the conceptual basis fails to take account of the costs involved in the improvement of service quality (see Juran 1951, Masser 1957, Crosby 1979, Aubrey and Zimbler 1983). Second, Parasuraman et al collected their data using ordinal methods (Likert scales) and then subjected them to analysis with methods better suited to interval data (such as factor analysis). However, the use of ordinal scales in statistics is limited, and there are many statistical authorities who accept the use of parametric statistics with Likert scale data. Finally, Parasuraman et al failed to draw on the large body of literature on the psychology of perception.

Logit models are discrete choice models based on random utility theory that a choice probability is calculated for each alternative; the utility of each choice alternative is the sum of a systematic component and a random one; all random components are distributed according to a Gumbel random variable (Ben-Akiva and Lerman 1985, Cascetta 2001). By the estimation of coefficients of the models the importance of service quality attributes on global customer satisfaction can be evaluated. A Service Quality Index (SQI) is then calculated by using estimated coefficients. This index, as the utility related to each alternative of choice, is calculated like a linear combination of attributes, each one weighted as to its importance. In one study of the bus industry (Hensher et al 2003), 13 service quality attributes were selected; each attribute varied on three levels producing different alternatives (bus packages).

Gronroos (1982) identified three components of service quality: technical (the outcome, ‘what’), functional (the process, ‘how’), and reputational (the corporate image of the organisation). SERVQUAL has been criticized for its focus on the processes of service delivery rather than the

According to Mangold and Babakus (1991), SERVQUAL’s focus on the functional aspects of the service–delivery process does not allow for accurate evaluations of service quality to be made. In support of this, Richard and Allaway (1991) found that measures of both technical and functional aspects accounted for more of the variation in choice behavior than functional measures alone. However, in defence of SERVQUAL, Higgins et al (1991) argued that measures of technical quality are contained in its dimensions of reliability, competence and assurance (security).

Sureschander et al (2001) argued that, by focusing on components of human interaction or intervention and the tangible facets of the service, SERVQUAL excludes other crucial aspects of service quality. They argued that features associated with the service should also include the service product or core service, the systematisation or standardisation of service quality to establish a seamless service experience, and the image of ‘goodwill to society’ that the organisation may attempt to create (similar to the ‘reputational’ component identified by Gronroos and Christian (1984)).

Brady et al (2002) emphasised that, in addition to the provision of quality services, the value of service, the physical environment in which the service is delivered, and other uncontrollable factors associated with the service encounter (such as emotions and behaviour) should all be included in assessments of service quality. Liljander and Strandvik (1997) also demonstrated the impact of consumers’ emotions on their evaluations of satisfaction with service quality and suggested that “emotions should conceptually be included in, and combined with, cognitive evaluations of service”. This view has been advocated more recently by Chui (2002). It therefore seems apparent from this more recent research that SERVQUAL
encapsulates only certain aspects of service quality, and that it fails to capture other potentially less controllable components that may have a greater impact upon evaluations of the quality of the service provision.

Ruth Bolton and James Drew (1991) did a study done to develop a model of how customers with prior experience and expectations assess performance level, overall service quality and service value. It was concluded that customer’s assessments of service quality and value are primarily a function of disconfirmation arising from discrepancies between anticipated and perceived performance levels. However, perceived performance levels also were found to have an important direct effect on service quality. Ko de Ruyter et al (1996) have done empirical testing to determine the relationship between Service Quality and Service Satisfaction. They concluded that Service Quality should be treated as an antecedent of service satisfaction. They further concluded that Service Quality and Service Satisfaction is a direct function of disconfirmation and perception. Service Quality and Disconfirmation seem to be directly related to perception.

Research has been done Boulding et al (1996) to find how customers update their perceptions of service quality over time and given that customers do change their perceptions of a service over time, how do ongoing service relationships (between customers and providers) develop, deteriorate, and, ultimately, end over time? They concluded that When evaluating new information about a service it is found that prior expectations get "double-counted" as customers update perceptions of quality. It was realised that individuals form "biased" perceptions of the new experience based upon their prior expectations. Customers prior perceptions influence not only their overall assessments of quality, but also their perceptions of each specific transaction.
The human element of service quality referred to all aspects of staff/customer interaction in service delivery. The importance of the human element in forming the customer’s perception of service quality has been identified by many marketing scholars (Jabnoun and Al-Tamimi 2003, Yavas et al 1997). Employees have an important effect on customer service because customers today are better educated than ever before (Mouawad and Kleiner 1996). Further, frontline employees play a vital role in representing the firm in interactions with outside parties, and influencing the cognitions, attitudes and evaluations formed by customers (Schneider and Bowen 1995). Thus, frontline employees were considered to be a main driver of customer satisfaction and favourable service quality perceptions. Finally, four out of the five SERVQUAL dimensions, were about human elements; reliability, responsiveness, empathy and assurance (Sureshchandar et al 2002).

Consistency of service delivery referred to the processes, procedures, and systems that would make service delivery a seamless experience (Sureshchandar et al 2002). It highlighted whether the service delivery process was standardised, streamlined, and simplified, so customers could receive the service without any problems. The structural aspects of the service delivery process have not, however, been adequately studied (Sureshchandar et al 2002). In the literature, there were a few marketing scholars who have tried to focus on the importance of the structural content of service delivery in service quality evaluation (Danaher and Mattsson 1998). The structural content of the service delivery process is considered important in service quality evaluation (Danaher and Mattsson 1998). The relative degree and intensity of activities such as waiting and delays in delivering the service have a significant effect on service quality (Danaher and Mattsson 1998).
Tangibles of Service were one of the few dimensions that have been consistently used by different researchers (Bahia and Nantel 2000). However, tangibles refer to physical facets of the service facility; equipment, machinery, signage, communication materials etc. (Bahia and Nantel 2000, Parasuraman et al 1985). It included the physical evidence of the service, except the personal appearance of staff which was included in the human element dimension. Employees and customers are usually influenced by the tangible facets of service in physiological, psychological, emotional, and cognitive ways (Bitner 1992). The intangible aspects of the staff customer interface have a considerable influence, both negative and positive, on service quality (Johnston 1995). Tangibles are associated with the impact on the customers’ inferences about what service should be like and therefore will influence the evaluation of service quality (Parasuraman et al 1993). Customer perceptions of tangibles were generally considered more important in the case of banks than other service industries such as securities brokerage, and product repairs and maintenance (Parasuraman et al 1988).

Research findings by Mohammad Al-Hawari (2008) indicated a significant influence of bank traditional service quality on satisfaction level. In particular, Service delivery process quality has the strongest relationship with customer satisfaction followed by employee service quality and tangibles.

Research done by Taylor (1993); Sirdeshmukh et al (2002); Patterson et al (2006); have concluded that a customer’s willingness to maintain a relationship with a firm is contingent on his or her perception of the benefits of a high-quality service that provides a continuous flow of value.

Bitner (1990); Bolton and Drew (1991) through their studies have argued that customer satisfaction leads to service quality. Oliver (1997) has stated that customer satisfaction is an affective state and service quality is a
cognitive state. Therefore, because the fact that cognition precedes emotions in the causal chain of psychological processes rests on a solid theoretical ground. Parasuraman et al (1985, 1988) However, have argued that Service Quality leads to Customer satisfaction.

François A. Carrillat et al (2009) state that Service Quality plays a pivotal role in helping firms build relationships with customers because it has large impact on customer satisfaction, attitudinal loyalty, and purchase intentions. Parasuraman et al (1996) found that service quality accounted for more than 60 percent in the variance of attitudinal loyalty. Anderson et al (1994); Cronin and Taylor (1992); Fornell (1992); Gotlieb et al (1994); Olsen (2002) have through their studies found that Service quality was considered as an antecedent of customer satisfaction. In addition, the service quality to customer satisfaction chain-of-effects has found ample empirical support across numerous service settings. Dabholkar et al (2000) have provided compelling evidence through findings of longitudinal study, that service quality precedes customer satisfaction.

François A. Carrillat et al (2009) state that Service Quality has a stronger impact on satisfaction and purchase intention in industries where the amount of customer processing is low and the service component of the offering is large (e.g., financial adviser) than in industries where the amount of customer processing is high and where the service part of the offering is limited (e.g., supermarket).

A large number of empirical studies have investigated the impact of service quality on outcome variables. Cronin et al (2000); Taylor et al (1997); Wallace et al (2004) have concluded that the outcome variables of service quality have been customer satisfaction, attitudinal loyalty, and, ultimately, purchase intentions. However, individual study findings have differed widely in terms of statistical significance, direction, and magnitude of service quality.
effects. A study by Gotlieb et al (1994) report a correlation between service quality and satisfaction above 0.80, whereas a study by Zhou (2004) report a correlation of 0.20 or below. Roberts et al (2003) from their study state that ambiguity surrounds the service quality and attitudinal loyalty relationship with studies that have failed to find a significant link between these two constructs.

Lisa J (2004) documented the impact of SERVQUAL on the measurement of Service Quality. She stated that the claims made in SERVQUAL largely remain undisputed and its popularity is acknowledge by even its major critics. However, based on the conceptual, methodological and interpretative problems that have been summarized in her review it was suggested that the problems associated with SERVQUAL may be more serious than is generally acknowledged. The considerable changes to the original version, which were required to adapt the instrument appropriately in the replication studies, raise a host of new problems. These replication studies have also failed to identify the five putative dimensions of SERVQUAL. Also, she concluded with stating that An alternative with the same level of general appeal and market dominance is yet to be produced.

There is still a lack of agreement about the magnitude of the impact of service quality on key marketing variables, as well as a theoretical model of service quality and its consequences.

Hess and Story (2005), through their study on consumer brand relationships, proposed a multidimensional model of commitment –trust-satisfaction-loyalty. SEM was employed to validate the model from two empirical studies. The results of the study have clearly shown that satisfaction is an antecedent to trust which is an indicator of loyalty.
Tsoukatos and Rand (2006) conducted a path analysis on perceived service quality, satisfaction and loyalty link in Greek Insurance industry and found out, firstly, the SERQUAL dimensionality was not confirmed and secondly, the linkage among service quality, service satisfaction and service loyalty were not clear at dimensional levels. They had deployed confirmatory and exploratory factor analysis for confirming dimensionality of Service quality.

Parasuraman (2006) discussed about balancing service quality and Productivity. Higher level of company inputs and lower level of customer inputs will lead to higher levels of service quality. Service quality in turn influences the outputs from the perspective of companies and customer.

Saravanan and Rao (2007) after careful evaluation of SERQUAL model of Parasuraman et al have found that certain important aspects of service quality were not covered in it.

### 2.3 REVIEW OF LITERATURE ON USE OF TECHNOLOGY

Kettinger and Lee (1994) viewed technology as service provided to business users, and improving service quality and user satisfaction has been a concern of researchers and practitioners. DeLone and McLean (1992) proposed that service quality be added as a measure of effectiveness of technology. Kettinger and Lee (1994); Kettinger et al (1997); Pitt et al (1995); Watson et al (1998); Kettinger and Lee (2005) and Jiang et al (2008); have focused on business users to understand the impact of technology on service quality.

Doug Johnson (2001) studied the impact of Technology in the field of education. He stated that the major purpose of using computers in schools is to enhance professional productivity. He further states that the use of
computers in teaching low-level thinking skills, while at times motivational for very young or at-risk students is very expensive for the results achieved. He also found that using technology helps to build personal portfolios of thoughtful, creative work which students and teachers can share with parents; to present worthwhile and authoritative reports to classmates; and to make meaningful contributions to efforts aimed at solving school or community problems. He concluded stating that use of technology is making school children better citizens, better consumers, better communicators, better thinkers and in short better people.

Rob Yanker (2001) conducted a study on converting customer satisfaction into share holder value. He concluded that successful companies understand the key aspect of satisfaction that provide differential value for their most attractive customers. He states that these companies build a customer-centric organization that makes satisfaction a central part of the company culture and they use technology to accelerate and increase their impact on their initiatives.

Kettinger and Lee (2005); and Pitt et al (2005) state that Technology is enabling and supporting the interactions of both internal clients and external supply chain partners with a wide range of services, including hardware/software selection and installation, systems development and maintenance, web design, network, helpdesk, and training.

Sunil Mithas et al (2005) studied the effect of technology investments on customer satisfaction. Their study was done to find answers to the following questions, Do technology investments have an effect on customer satisfaction? What are the causal mechanisms that mediate the effect of Information Technology (IT) systems on customer satisfaction? Does the effect of Technology on customer satisfaction differ across industry sectors? They found support for the hypotheses that the effect of Technology
investments on customer satisfaction is mediated through the effect of Technology on perceived quality and perceived value. Their results also indicate that the effect of Technology investments on customer satisfaction differs between the manufacturing and service sectors. Their research validated a theory of mediation effects of perceived quality and perceived value. Their study synthesized effectiveness of information systems and marketing literature towards an integrative understanding of the relationship between IT investments and customer satisfaction.

Parmita Saha and Yanni Zhao (2005) studied the relationship between online service quality and customer satisfaction in Internet banking. They stated that one of the key challenges in using the internet as a service delivery channel is how they manage service quality, which holds a significant importance for customer satisfaction. Nine service quality dimensions were identified in this study (efficiency, reliability, responsiveness, fulfillment, privacy, communication, personalization, technology update, and logistic / technical support). The quality performance of all the dimensions was found to have a strong impact on customer satisfaction.

Tim Coltman (2006) states that for Customer Relationship Management programs to be successful, a combination of technical, human and business capabilities is required.

Narges Aarabi and Ali Akbar Bromideh (2006) studied the impact of technology on Iranian Insurance companies. They state that internet and related advances in technology has significantly affected the insurance market and organizations. He state the the Iranian Insurance companies viewed these technologies as a opportunity to enhance their operations, productivity and service quality. However, lack of trained staff and the supporting hardware backbone where seen as challenges. They also identified that certain insurance
products such as motor insurance and marine insurance were more suitable for use of technology in the product delivery process.

Sara Faraji Jalal (2007) did a study on procurement process through use of technology in B2B market. They concluded that e-commerce in the procurement process simplifies the separate sub process of procurement. Enterprises which endeavor to have a success in doing business electronically should simplify the sub processes namely, receiving the delivery data, supplier requisition request, transport ordering, reclamation solving and bidding.

Ronnie Jia et al (2008) have stated that to deliver quality service, the Technology department should emphasize meeting customer needs (customer orientation), and Technology managers play a pivotal role in guiding daily work and service (managerial practices).

Adediran Oluwatoyin and Adediran Oluseun (2008) studied the effect of TQM on the Performance and Stakeholder Satisfaction among Airlines. Total Quality Management (TQM) is a management philosophy which focuses on the work process and people, with the major concern for satisfying customers and improving the organizational performance. They stated that the use of a strategic approach to quality management by airlines will improve their competitiveness. This approach ensures that airlines remain customer focused. TQM enables innovativeness as it empowers employees to take decisions that affect their job. For the airlines to be innovative in it offerings, it requires a flexible structure which permits cooperation between different functions. The implementation of TQM involves the buying in of different units involved in the process of service delivery into the ideology and practices of quality management. TQM. Their findings also revealed that the relentless pursuit of improvement in service delivery bring about added value to customers by making the organization focused on satisfying
customers needs, while team work and training empowers employees for the continuous improvement drive of the organization.

Mohammad Ali Sarlak and Rasool Sanavi Fard (2009) conducted a study on the impact of CRM on the Customer Satisfaction in Agricultural Bank. CRM is considered to be one of the business strategy tools, which helps to select and manage the most valuable relationships with the customers. He stated that there exists a relationship between use of technology in the form of a CRM package and the customer satisfaction levels.

2.4 LITERATURE REVIEW ON PRODUCTIVITY

Kemal, Yasin and Zafer (2004) empirically investigated whether business process reengineering (BPR), which requires substantial investment in information technology to integrate separate tasks into complete cross-functional processes, is associated with enhanced firm productivity. They conclude that BPR indeed positively affects firm’s productivity.

Jorge A. Romero et al (2009) studied the effect of the implementation of Enterprises Resources Planning (ERP) on the productivity of Oil and Gas industry. They state that The source of competitive advantage comes from productivity and capacity utilization. These advantages are gained through implementation of ERP. They claim that ERP impacts productivity and capacity utilization positively and these are the sources of profitability. They also state that ERP implementation for provides significant improvements in capacity utilization. They further state ERP systems enhance the ability of the company to collect, process and use information about input supply, output demand and internal production, companies are able to add value for its customers by more closely matching their production to customer needs. This effect can be appreciated in the productivity ratio, where
improvements in productivity are realized because ERP systems enable better coordination between different productive units.

Jeffrey Hales (2009) studied the relationship between implicit employment contracts and productivity. He states that Implicit employment contracts are a common way to motivate firm productivity in practice. He found that reputation concerns lead to greater firm productivity and higher payoffs for all firm members.

Kunsoon Han and Young Bong Chang (2010) studied the interindustry information technology (IT) spillover, wherein IT investments made by supplier industries increase the productivity of downstream industries. They found that industries receive significant IT spillover benefits in terms of total factor productivity growth through economic transactions with their respective supplier industries. More importantly, they find that two characteristics of downstream industries, namely, IT intensity and competitiveness, which have been shown to moderate the effect of internal IT investments, play an important role in IT spillovers as well. Also their results suggest that IT intensity as well as competitiveness of the downstream industry moderate the effect of IT spillovers. Finally, their results suggest that the long-term effects of spillovers are greater than short-term effects, suggesting that learning periods are required to reap the benefits from the IT spillovers.

Shingo Takahashi (2010) studied how the Australian coal mining industry adopted multitasking job designs by eliminating two types of task demarcations: (a) the demarcation between production and maintenance stream tasks and (b) the demarcation within the production stream. He estimated the effect of multi-tasking on productivity and explains its effects. His results indicated that the elimination of between-demarcation would increase coal production by 27% whereas the elimination of within-
demarcation has no effect on productivity. Furthermore, he finds that the relationship between coal demand uncertainty and the elimination of demarcations is weak.

Kathy Harte and Kathleen Mahieu (2010) studied about Improving workplace productivity. He states that today more than ever, organizations and their managers are tasked to “do more with less” as businesses globally look to maximize their workforce output and increase productivity. The parallel initiative to increasing productivity is reducing expense. In order to improve productivity, the organization should work toward improving the health of the employees. There seems to be a correlation between productivity and wellness programs that are intended to keep the healthy and those at risk from becoming sick(er). They also state that that positive worker health can lead to improved quality of goods and services, greater creativity and innovation, enhanced resilience and increased intellectual capacity, which is the ultimate in gaining an organizational edge that leads to success.

Rumki Majumdar (2010) studied the impact of liberalization on productivity in Indian Electronics Hardware industry. She found that industry achieved impressive growth in capital productivity. Surprisingly she found that the effort of the companies to employ skilled labour, larger scales of production and their strategy to improve production technology through Research and Development (R&D) and/or imports did not benefit productivity substantially.

2.5 LITERATURE REVIEW ON SERVICE QUALITY, PRODUCTIVITY AND USE OF TECHNOLOGY IN AIRLINE SERVICES

Peter Cappelli and Peter D. Sherer (1988) studied the relationship between Satisfaction, Market Wages, and Labor relations in among Airline
service providers. The most general finding of their was that the traditional labor economic and industrial relations emphasis on markets and wage contours are good predictors of pay satisfaction. Information from management appears to play a role in shaping satisfaction, especially with pay, and helps explain why management has stepped-up. The study clearly suggest that workers are much more satisfied with less supervision and with greater control over their jobs. Perceptions of work rule changes are associated with greater satisfaction with work, suggesting that such changes may not necessarily be viewed as "concessions" by workers, even though they are often portrayed as such. Communication programs, especially where there are attempts to change the work environment. In general, the role of information seems an important, albeit neglected, area in shaping worker attitudes and perceptions.

Hugh Milloy (1992) studied the Quality of Service in Australian Passenger Aviation. A key objective of the Government’s transport reform agenda is to make service providers more responsive to consumer needs. The concept of quality of service refers to the degree to which the needs and wants of consumers are satisfied by the service provided. Although the concept is easily understood, it is not easily measured. An aspect of service quality refers to a characteristic or group of characteristics of a service from which consumers derive utility. He had identified 26 aspects of service quality which are applicable to passenger aviation services. While some of these aspects are crucial to consumer welfare, others are of lesser importance. The following key aspects of service quality were considered to be the most important to include in a quality of service measurement system: namely, safety; passengers' accessibility to the regular public transport network; frequency of service; non-stop service; on-time performance; airport services and facilities; and on-board comfort and service. Assessing the impact of reform measures on quality of service required measurement of the key
aspects of service quality over time. He identified indicators of safety, frequency of service, non-stop service, on-time performance, and airport services and facilities. The most significant deficiency in the study done by him was with regard to passenger processing delays in airport terminals.

While Evaluating Service Quality and Productivity in the Regional Airline Industry, Lawrence and Ray (1994) state that the two critical elements affecting competitiveness are quality and productivity. They examined productivity and quality issues in the regional airline industry in the United States. They generated quantitative values for effectiveness based upon the Service Quality Model via the passenger survey, and efficiency based upon the Service Productivity Model, which utilized aircraft manufacturers' operational data. These two models are linked in that satisfaction can be used as a surrogate for quality (effectiveness as perceived by the passenger), while efficiency is measured using operating cost metrics. In this sense, the "quality" model provides numerator data (satisfaction= quality=effectiveness) for the productivity model. When all reported data are considered from the perspective of both models, the results are encouraging. Integration of the models indicates that the reported high levels of quality (80 percent satisfied) suggest an increase in effectiveness attributed to the larger aircraft. The productivity model now would show increases in both output (effectiveness) and input (efficiency) factors, which clearly indicate that productivity gains are possible. The study confirms that passengers really care about service quality and that they perceive aircraft type to be an important quality attribute. In addition, productivity shifts in a positive direction as a result of the improved technological features of the new aircraft. Furthermore, they stated that regional airlines can improve their service quality image by communicating to passengers through a variety of means.
Lawrence F. Cunningham and Clifford E. Young (2002) studied the cross-cultural perspectives of service quality and risk in air transportation. They compared U.S. and Korean customers in terms of their perceptions of airline service quality based on SERVPERF and industry-based measures, as well as their perceptions of risks involved in the airline choice. SERVPERF is a set of multi-dimensional measures of customer evaluations of service quality. The results indicate that (a) U.S. passengers are generally more satisfied with their airline service than Korean customers on most of the SERVPERF dimensions; (b) Koreans are generally more satisfied with the bumping procedures whereas U.S. participants feel more satisfied with the airline’s baggage handling, operations/safety, and connections; and (c) U.S. participants perceive higher levels of performance and financial risks whereas Koreans feel greater social risk in choosing an airline. This study also examines the SERVPERF, industry-based measures, and perceived risk in predicting customer satisfaction with, and intention to re-patronize the airline. The results suggested that U.S. customers consider service reliability, in-flight comfort, and connections as the key factors determining satisfaction with airline service whereas Korean passengers generally regard reliability, assurance, and risk factors as predictors of satisfaction. The determining factors of customer intention to re-patronize the airline are reliability and empathy for U.S., and reliability and overall risk for Korean customers. The study demonstrated the applicability of SERVPERF as a cross-cultural tool and indicates the importance of perceived risk in cross-cultural studies.

The results from the regression analyses offer significant insight for international airlines. Their study also indicated that U.S. customers think of service reliability and connections as the key factors determining the airline service quality. The airlines serving U.S. travelers are evaluated favorably on these two dimensions. On the other hand, Korean passengers generally consider reliability and assurance as the most important factors and other
industry-based service items as less important. However, they perceive the airlines they fly with less favorably on these SERVPERF dimensions than U.S. customers. Thus, the international airlines targeting Korean passengers should focus efforts on improving such core services. Also Koreans generally seem to perceive a lower level of risks in selecting an airline. However, when they evaluate their satisfaction with an airline, their perception of risks becomes important.

They also concluded that the higher the perception of performance and psychological risk, the less favorable their satisfaction levels. This reaction might be caused by cognitive dissonance or feeling of regret, that is, a thought that they made a poor choice of an airline. They suggested that the airline could probably reduce the negative impact of perceived risk by providing the core services consumers want (i.e., reliability and assurance) and confirming that travelers made the right choice.

Diah Natalisa and Budiarto Subroto (2003) studied the effects of Management commitment on Service Quality to increase customer satisfaction of domestic Airlines in Indonesia. Their results showed that a majority of the customers were not satisfied with the service provided. The five dimensions of service quality as told in SERQUAL model affected the customers’ level of satisfaction. The customers’ level of satisfaction or dissatisfaction were not differentiated by price and personal variables, but by other variables, like 1) the customer perception of service quality, 2) the appropriation between the service quality and the external communication and 3) the situational variable. They also stated that fulfilling the company’s promise (conformity between service quality and external communications) ha significant effects on the level of customer satisfaction.

Nick et al (2004) studied the Service quality delivered by travel agents in Northern Cyprus was examined using a SERVQUAL scale. The
translated instrument was purified using an item-categorisation technique. Expectations and performance (SERVPERF) scores indicated that respondents were concerned most with the efficiency and least with the personalization of the services offered. The largest service gaps were identified with the ‘modern’ appearance of the service and service-scape, and the smallest with interpersonal qualities of service. Multiple regression showed promptness, empathy, efficiency and service-scape aesthetics to be the main determinants of customer satisfaction. SERVPERF scores gave a better prediction of overall satisfaction and showed marginally better reliability and validity than those from which expectations were subtracted. Instead of the predicted SERVQUAL five-factor solution, factor analysis showed an underlying uni-dimensionality that is consistent with the findings of other authors. In their study, SERVPERF scores gave a better prediction of overall satisfaction and showed marginally better reliability and validity than those from the SERVQUAL instrument.

Allard et al (2004) studied the Role of Pre-Transaction Services in airline services. Their study was pertaining to the usage of travel websites by customers either by themselves or through travel agents. Travel websites are used to different degrees, and for a variety of combinations of pre-transaction, transaction and post-transaction services. A better understanding of how customers interact with online services will help providers improve service quality to levels that satisfy or even delight customers, and thus create loyalty.

They found that Airline service Providers often consider supporting and pre- and post-transaction online services as non-essential and mainly use them to differentiate the service package. They suggested that pre-and post-transaction service delivery, which is typically built around supporting services, may significantly impact overall quality perceptions. They also opined that in the context of travel e-commerce, pre- as well as post-
transaction services should arguably be considered potential core services, paving the way for future transactions.

They state that the design of the user interface acts as a business card for the travel agency. User interface quality should be high, because it affects the overall image of the service provider. The navigation aspect of the user interface appears to be essential: Travel sites would gain much by extremely user-friendly navigation toolbars. Decisions to book a vacation through a travel website seem to depend on the presence of fast and reliable navigation tools and of an easy-to-use but functional search engine. Cumbersome navigation and search facilities, or processes that are constantly blocked by irrelevant pop-ups and banners, are likely to be detrimental to revisiting and re-use of the website and thus to customer loyalty. The proper use of technology in all aspects of the user interface can be a significant asset of the service provider. Furthermore, technology can contribute to continuous improvement of the online service by studying patterns in the surfing behaviour of customers.

Yoshinori Suzuki (2004) studied the impact of Airline service failures on Passengers’ carrier choice. They state that a traveler’s choice of airline may not be affected by any service failure experience. This condition implies that, in each trip, travelers may choose the airlines that maximizes their utilities without regard to the past experience.

Jin-Woo Park et al (2006) studied the impact of Airline service quality and Marketing variables on Passengers’ future behavioral intentions. They studied how perceived price, airline service quality, perceived value, passenger satisfaction and airline image determine passengers’ future behavioral intentions. It was found that there were significant relationships between the variables except for three paths. The three insignificant paths were the relationship between ‘perceived price and passenger satisfaction’,
‘service quality and airline image’ and ‘perceived value and airline image’. Perceived price, perceived value, passenger satisfaction, and airline image were each found to have a direct effect on passengers’ future behavioral intentions. Their study disclosed that perceived price, service quality, perceived value, passenger satisfaction, and airline image each had a significant influence on Australian international passengers’ future behavioural intentions. These variables were directly or indirectly related to Australian international passengers’ repurchase intentions and ‘word-of-mouth’ communications.

Juan Carlos Martín et al (2006) studied the willingness of customers to pay for Airline Service quality. They estimated valuations of some service-quality attributes in an airline choice context using stated preferences methods. A feature of their analysis was the examination of variations in values according to different characteristics of the service, such as price, penalties for changes in the ticket, legroom, food, etc.; the currently experienced level of the attribute, and various socio-economic factors that affect the characteristics of the trip and passengers. In addition, the important issue of added value regarding different attributes was also addressed.

Kien-Quoc Van Pham and Merlin Simpson (2006) conducted an Empirical analysis of Trans-Atlantic Airline Passengers to study the impact of frequency of use on Service Quality expectations. They state that the reliability of the SERVQUAL model to assess service quality, the paucity of empirical studies addressing service quality antecedents indicates the need to revisit the causal relationships between these antecedents and the “corollary” service quality assessment. Their study has only focused on the relative importance of the five SERVQUAL operational dimensions relative to Frequency of Use and the importance of Frequency of Use as an antecedent in the formation of service quality expectations. The entire antecedent-service
quality expectations conceptual construct can definitely benefit from further assessment of other identified antecedents, namely, word of mouth communications (opinions and referrals), personal needs, and corporate communications (advertising) as to their influence on service quality expectations formation.

Their study also addressed past experience as a possible antecedent of predictive expectations. Their study Having established the relatively critical importance of past experience as the most influential antecedent to the formation of service quality expectations in the context of a high-contact experience-quality service followed by personal needs, word of mouth communications and finally corporate communications.

Blaise et al (2007) conducted an investigation into airline service quality performance between US legacy carriers and their European Union competitors and partners. Their investigations support the conclusion that EU airlines are delivering superior service quality on some key aspects of service quality than their US competitors and partners, but lost baggage issues among major EU carriers remains a major service difficulty. They also found that the airline industry faces service quality failures on a personal consumer level on a daily basis. They found that the Airlines are finding it difficult to market a consistent service quality experience.

Silke J. Forbes (2008) studied the effect of Service Quality and expectations on customer complaints. Customer complaints measure consumers’ dissatisfaction with the quality of a product or service. If product quality is unobservable ex ante, customer complaints may be driven by expectations as well as by the actually experienced quality level. The researcher tested whether the level of quality that could be expected prior to consumption affects the number of customer complaints after controlling for–ex post observable–actual quality, using data from the US airline industry. It
was found that there are fewer complaints when actual quality is higher. It was found that the number of complaints per passenger increases when actual quality decreases and that, controlling for actual quality, higher expected quality leads to more customer complaints. When the effect is decomposed into better-than-expected and worse-than-expected quality, it was found that worse-than-expected quality has a large effect on complaints whereas there is no statistically significant effect of better-than-expected quality on the number of complaints.

Zhou Ruiqi and Pritchard Adrian (2009) have measured the service quality of Travel agents in Guangzhou, South China using the SERQUAL scale developed by Parasuraman et al. The instrument proved to be valid and reliable with the results of the survey showing that there is a gap between expected service and perceived service. The largest gap was in the dimension of reliability. The item scale within this dimension showed large negative gaps between expectation and perception in the ability of travel agents to perform the service right first time and complete their promised tasks. The gap in the dimensions and items of reliability are in line with SERVQUAL studies into other service industries in China.

Jeffrey and Daniel (2009) studied the relationship between multimarket contact and service quality in the US Airline Industry. They set two hypotheses: (1) multimarket contact negatively affects service quality and (2) multimarket contacts in less competitive markets more negatively affect service quality. These hypotheses were tested using U.S. airline on-time performance data to measure service quality. They found that multimarket contact increases delays and that this effect is greater for contacts on more concentrated routes, although the effect diminishes on very highly concentrated routes. These findings provide support for the mutual
forbearance hypothesis and suggest that multimarket contact facilitates tacit collusion on quality as well as price.

In summary, Service quality is a multifaceted phenomenon formed through various numbers of dimensions which may be further require detailed study. Most of the researchers have conducted generalized study on the dimensions and there has not been much consensus on these findings among the academic world. Also, there is no study which has been done to model the relationship between the use of Technology, Productivity and Service Quality. This is the gap that has been identified from the extensive literature review that has been done. Having identified the gap in the literature, the present study endeavors to fill this void.

The detailed research model framework is given in the next chapter.