The service industry plays an important role in the world economy. India is competing with other nations for an increasing share of the emerging world market. Therefore, improving the quality of Indian goods and services has become a National concern. There have been extensive studies made on the topics of productivity, the use of technology and service quality. The role of Technology in improving productivity is also well documented. The extensive use of Technology to enhance productivity may result in poor service quality as perceived by the customer.

However, rarely do we find any attempt to have been made to study relationship between Productivity, Use of Technology and Service Quality. The possible reason for not many research works on modeling the relationship between productivity, Use of Technology and Service Quality may be due to the fact that productivity and Use of Technology can be expressed easily in quantitative terms but Service Quality is based on perception. Hence, this basic difference in expressing Productivity, Use of Technology and Service Quality makes it that much more challenging to explore their relationship. Hence, there is a pressing need to model the relationship between productivity, Use of Technology and Service Quality.

The difficulty in studying this relationship can be overcome by understanding all the three from a customer’s point of view rather than as
If we endeavor to understand the relationship from a customer’s perception, it is indeed possible to relate the three. Hence, it would only make sense to establish the relationship between Productivity, Use of technology and Service quality as derived from the perception of customers.

Indian Airlines services are chosen for this study because this industry is a major infrastructural component of an economy. Also, the Indian Airline industry uses technology in a very big way for delivering the service. After the introduction of open skies policy by the Indian Government, the Airline services industry got a huge boost with the entry of many players. The consequent increase in competition has made both the Use of Technology and Service Quality as a key differentiating factor for Airline service providers to improve their market and profit positions.

The study models the relationship between Productivity, Use of Technology and Service Quality among Indian Airline service providers. This model would provide valuable information for the Indian Airline service providers. This information would help them to invest in Technology for enhancing Productivity but without compromising on Service Quality. The model would also provide them with insights into components of Service Quality which are related to Technology.

The objectives of the study were; to develop an inventory for Service Quality measurement for Indian Airline Services; to assess the empirical validity of the developed inventory of Service Quality for Indian Airline Services; to develop a model establishing the relationship between
Productivity, Use of Technology and SQ and; to test the model using Structural Equation Modeling.

The research design uses Structural Equation modeling. The research used a two stage questionnaire, first questionnaire designed to establish the service quality inventory suitable for Indian Airline service providers and the second questionnaire suitable for modeling the relationship between Productivity, Use of Technology and Service Quality among the Indian Airline service providers. A combination of univariate and multivariate statistical techniques like comparison of mean score, one way ANOVA, Multiple regression, Exploratory Factor Analysis, Confirmatory Factor Analysis and Structural Equation Modelling were used for data analysis of the study.

An inventory suitable for measuring Service Quality of Indian Airline service providers was developed. This accomplished the first objective. The second objective of assessing the empirical validity of the Service Quality inventory developed has been achieved through the application of Exploratory Factor Analysis and Confirmatory Factor Analysis. The research established a relationship between Productivity, Use of technology and Service Quality. Finally the model was tested using Structural Equation Modeling.

The customers feel that use of Technology by Indian Airlines service providers will help in improving the check in facility for the baggages, help the Airline staff in guiding them at interchange points during the journey,
help them during check-in and can ensure on time take off of flights. Customers feel that technology can help them in booking tickets, help them in handling of misplaced luggages. Customers also perceive that increasing the companies input for the services will result in increased service quality. Customers feel that decreasing their input for the services will result in increased service quality. They feel that the Use of Technology will result in increasing the Service Provider’s input and also reduce their input. Customers also opine that Use of Technology enhances the performance of Pilots, the performance of crew members, the performance of aircrafts, the performance of associated equipments and the performance of communication tools. The use of technology has a positive influence on the flight timings; On time flight take off and On time flight arrival. However the Use of technology has no role in timings of flights nor does it enhance the flight routes available for an airline.

The Indian Airline service providers should focus on the inventory of SQ identified, namely Ease of booking, Flight timings, Guidance of staff at airport and Check in facilities. The Airlines should use technology in helping customers to check in, during check in of luggages, for on time take off and on time landing of flights The Airlines should use technology for helping customers book tickets and in handling of misplaced luggages.