Chapter I

INTRODUCTION

1.1 Overview
This chapter is an introduction to the research topic and provides the background to the research, presents the research areas, identifies the significance of this research, presents the problem statement, gives the research questions, lists the objectives of the research, narrates the rationale for the research, lists the methods used in this research, presents the basic definitions, and places on record the research contribution and limitations. The chapter also provides the outline of the thesis.

1.2 Background to the Research
Total Quality Management (TQM) implementation in hospitals is just a few decades old concept in general, and relatively a new concept in India. Accordingly, a considerable number of well-equipped hospitals in the country are very keen on implementing TQM in their facilities, so as to ensure optimum quality standards and for rendering the best possible health care services to the patients. Owing to the emergence of globalization and liberalization, both the manufacturing and service industries are more particular about the best possible quality standards in order to enable them to encounter the stiff competition from both the domestic and the global market. This has made both the manufacturing and service industries to adopt various quality management practices. TQM is one among the most prominent quality management concepts fruitfully and effectively implemented in the manufacturing sectors in the world over. TQM as such is a manufacturing concept and most of the terms have evolved with the manufacturing sector as the reference. However, as both manufacturing and service industries have a systematic set of processes which lead to the
delivery of the final product (or service) the concept can be applied to the service industry also. As a result of late, the concept is widely used in service sectors, especially in hospitals.

Hospitals have been progressively implementing TQM mainly to cut costs, enhance efficiency and provide top quality patient care. Various dimensions of quality such as effectiveness, efficiency, technical competence, safety, accessibility, interpersonal relations, continuity, amenities etc. are being evaluated by the patients in hospitals. Thus TQM is applicable for all the operations in the hospitals which define the overall quality of service received by the patients. It has been observed by many researchers that TQM can be an important part of hospitals’ competitive strategy (Deb, 2014; Harrington, Voehl & Wiggin, 2012). Studies on TQM implementation in service industries have revealed that it has improved customer satisfaction, enhanced market standing and increased the profitability (Ketchen & Hult, 2007; Martinsuo & Sariola, 2015). Thus, TQM can provide a competitive edge to the hospitals. Hospitals which have implemented TQM are more likely to differentiate themselves from their competitors on the basis of greater service quality provided to the patients. Therefore the TQM concept is greatly adopted by the hospitals as a strategy to enhance customer satisfaction and organizational performance by providing high-quality products and services by involving stakeholders, fostering teamwork, customer-driven quality and continuously improving structures and processes by applying quality management techniques and tools. Managers in the hospitals have implemented TQM and tried the Deming’s Plan-Do-Check-Act (PDCA) quality-improvement approach and the ISO 9001:2000 quality management system (QMS) to improve the quality in the hospitals.

However, applying TQM in hospitals is not as easy as in other service sectors, as the quality definition is difficult in the setting of a
hospital. Researchers have given a four level definition of quality in the context of hospitals (Al-Ali, 2014). The first level was in the fundamental care where quality referred to issues such as communication, privacy, empathy, and responsiveness. The second level was the general area of care which included specialties such as cardiology, and quality was with reference to information, acceptability, equity, and appropriateness. The third level was with reference to clinical specialty such as physiotherapy where quality characteristics included accessibility, efficiency, and reliability. The fourth level was the care group such as maternity where quality characteristics were in connection to appropriateness and effectiveness (Al-Ali, 2014). This categorization explains the difficulty of a general definition of quality in case of hospitals in comparison to other service sectors such as hotels where the service does not have many levels. Thus it is imperative that applying TQM in hospitals is not as easy as in other service sectors. With all these differences in quality with reference to the levels, attempts have been made to implement TQM in hospitals so that the efficiency and effectiveness could be improved.

In India, Healthcare is one of the largest sectors both in terms of revenue and employment and is being delivered by both the public and the private sectors. The public healthcare system, run by the Central and State Governments mainly focuses on providing basic healthcare facilities in rural areas while the private sector provides majority of secondary, tertiary and quaternary care with a major concentration in metros, tier I and tier II cities. The healthcare sector consists of the Medical care providers, (physicians, specialist clinics, nursing homes and hospitals) Diagnostic service centres and pathology laboratories, Medical equipment manufacturers, Contract Research Organizations (CROs), Pharmaceutical manufacturers and Third party support service providers (catering, laundry etc.). The quality of service provided by
these facilities is monitored by various quality accreditation norms like the National Accreditation Board for Hospitals (NABH) and National Accreditation Board for Testing and Calibration Laboratories (NABL) etc.

With the Indian economy enjoying a steady growth, the healthcare industry in the country is heading towards growth phase. As per industry reports, healthcare is poised to grow at an estimated annual rate of 19 per cent to reach USD 280 billion by 2020 with India being recognized as a destination for world class healthcare (Deloitte, 2013). However, unlike some developed countries, 80% of the healthcare expenditure in the country is borne by the patients themselves and that borne by the state is 12% and the expenditure covered by insurance claims is about 8% (Saini, 2011). The WHO (2012) had estimated that more than 44% of Indian population earns less than one dollar a day. As per the Finance Ministry, the overall inflation rate in India was about 9.4 percent during April-December 2010, while inflation in medical expenses was in excess of 10 percent (Medical bills rising faster than inflation, 2011). There are other factors that contribute to the escalation in cost of medical care which includes: increasing demand for medical services and limited supply, health insurance penetration, improved diagnostic capabilities, and increasing dependence of doctors on diagnostic procedures. Increasing demand for quality in medical care services plays a critical role in increasing the overall cost of medical care services. Even though the empirical evidence indicates an increasing demand for healthcare services across India, affordability is questionable. This has resulted in market segmentation, with an increasing demand for quality medical care services one side and an increasing demand for medical care services at affordable cost on the other end (Shah & Mohanty, 2010). This higher demand with lower supply of medical facilities has resulted in poor quality of medical care services. Therefore Quality enhancement in healthcare
organizations has been a constant endeavour in India since the past several decades. Therefore many healthcare firms in the country are keen on implementing TQM as a means to enhance customer satisfaction and business performance which in turn give them a competitive edge in the business.

Nevertheless, it has to be noted that TQM is a Western management concept developed to ensure quality in manufacturing sectors and has evolved in Japan and adopting it by a different country like India in a totally different sector such as hospital needs some considerations. First of all TQM has people dimensions and hence it is influenced by the social and cultural aspects. Secondly, it is oriented more towards the processes of a production line and it has to be reoriented to the service sector. Several researchers have endorsed to the view that TQM implementation need to consider the differences in organizational structures, culture and social behaviour of people, interpersonal relationships, reward and recognition systems, service provider attitudes, management attitude, supply chain management, process management, and patient expectations, as all these variables play significant roles in TQM implementation and its outcomes (Mosadeghrad, 2013). While a group of authors have acknowledged that TQM implementation in hospitals have improved the quality of their product and services (Hamidi & Tabibi, 2004; Mohammadi, Mohammadi, Hedges & Zohrabi, 2007; Mehrotra & Kumar, 2013) another group have found that TQM did not sustain health service quality, patient satisfaction and productivity (Nouri, 2001; Mosadeghrad, 2014; Nwabueze, 2014). Thus from the literature it is evident that just adopting TQM principles in hospitals does not guarantee its success. However, if it is systematically implemented it will certainly go a long way in ensuring good results. Therefore the adoptability of TQM in the
service sector such as hospital is a potential area of research. This research is an attempt in this direction.

1.3 Research Areas

The focal areas of this research are ‘Total Quality Management’, ‘Competitive Advantage’, and ‘Business Performance’ in the context of hospitals. However, the scope is not limited to these broad areas of research, but it extends to the areas related to these main areas.

1.4 Significance of the Research

TQM is an emerging and widely used management concept fruitfully and effectively implemented in both manufacturing and service sectors in the world over, and the literature is inundated with research outcomes in the areas of TQM and their chequered. Nevertheless, not many have explored into the area of TQM implementation in hospitals even though many hospitals are today ISO certified and have implemented TQM principles and practices. So, this research is significant as it explored a less investigated area to seek relationship between TQM implementation and its desirable outcomes.

Secondly, the significance of this research lies in its ability to provide empirical evidence to the linkages between the individual dimensions of TQM practices and those of gaining of the Competitive Advantage (CMA) and Business Performance (BNP). The findings of this research would be useful for both the academicians and the practitioners. For academics the research would contribute a model which is empirically validated and it adds to the body of knowledge and provides immense scope to future research in this field. For the practitioners, first it justifies with empirical evidence whether TQM has the ability to produce a competitive advantage in the market for the hospitals and enhance business performance. Second, it
provides a basis for strengthening the weaker dimensions of TQM practices which may have to be strengthened to reap the benefits of TQM.

Finally, this research is significant to the field of TQM implementation in hospitals because it has systematically identified the most relevant dimensions of TQM which need to be considered in the implementation process with specific reference to hospitals. One of the important aspects of TQM is the issue of measurement of the TQM practices. This research contributes a tested and validated metric for the measurement of TQM practices, which can be used both by the academics and the practitioners. Finally, the research has contributed TQM Model for the hospitals which can be used by both the hospitals which have already implemented TQM to fine tune their TQM dimensions and the hospitals which are planning to implement the TQM as it provides a clear understanding about the dimensions which need to be considered during the TQM implementation. Thus, this research has a significant contribution in the area of TQM implementation in hospitals.

1.5 Problem Statement

The success of TQM in manufacturing industries has made the service sectors emulate the TQM practices so as to improve their Business Performance (BNP) and gain a Competitive Advantage (CMA). There are several researches which have indicated that even in service industries TQM practices have produced similar results (Sabella, Kashou & Omran, 2014; Zineldin, Zineldin & Vasicheva, 2014; Ishijima, Eliakimu, Takahashi & Miyamoto, 2014). One of the leading service sectors in India is Healthcare Industry in which the hospitals play a major role. A very large number of hospitals in India both from private and public sectors have imbibed quality standards and are ISO certified with TQM practices in place. But there are
not many studies on TQM practices in healthcare. Thus the research gap found through the literature review is that there is no empirical evidence for the linkage of the TQM with the CMA and BNP, and hence the following become the problem statement of this research:

“To seek empirical evidence for the significance of influences of TQM practices in hospitals on the gaining of the Competitive Advantage and the improvement in Business Performance.”

1.6 Research Questions

The statement of the problem given in the previous sections leads to a series of research questions which are as follows.

1. What is the relevance of TQM implementation in hospitals?

2. What are the dimensions of TQM practices which best represent TQM implementation in the context of the hospitals?

3. What are the dimensions of Competitive Advantage (CMA) and Business Performance (BNP), which are relevant to the public and private hospitals?

4. What would be the interrelationships between the dimensions of TQM with those of CMA and BNP?

5. What would be the statistical significance of relationships between the various constructs mentioned above?

6. What would be the challenges in TQM implementation in hospitals?

7. What would be the suggestions and recommendation to the strategic managers of the hospitals to improve TQM implementation?

8. What would be the TQM model for the hospitals and how can it be made operational?
1.7 Objectives of the Research

The aim of this research is to find the means to enhance the TQM implementation in hospitals. To accomplish this aim, following specific objectives have been identified.

I. To understand the concepts, rationale and the relevance of TQM in health care entities.

II. To identify the dimensions which constitute TQM practices, Competitive Advantage (CMA) in business, and Business Performance (BNP).

III. To establish the interrelationships between the dimensions of the above constructs in the form of a hypothetical model.

IV. To empirically investigate the significance of interrelationships between these constructs.

V. To make suggestions and recommendations to the strategic managers in the hospitals to improve upon the TQM implementation based on the empirical findings.

VI. To develop a TQM implementation model to the hospitals and provide the operationalization procedure.

1.8 Rationale for the Research

Rationale 1- There is literature evidence for the fact that TQM results in the enhancement of business performance and helps the organizations to gain competitive advantage in business. While most of these studies are theoretical, very few of them provide empirical evidence to support the relationship. Moreover, most of the studies in TQM are in the manufacturing context as it is a concept developed for those industries and relatively fewer studies in service industries. When it comes to hospitals, which is a service
industry there is no evidence for a detailed empirical study, which link the three constructs TQM, CMA and BNP. Therefore, it is necessary to seek empirical evidence to justify the interrelationships between the research constructs, which becomes the first rationale for this study.

**Rationale 2**- There are several theoretical models, which deal with the interrelationships between TQM, CMA, and BNP. However, these studies are mainly theoretical and even those studies which are empirical some specific dimensions of these three constructs have been tested with reference to some service sectors. There is no evidence for the availability of empirical relationships between all the dimensions of the constructs considered in this research in the context of hospitals. In this research efforts are made to provide evidence for the interrelationships between all the dimensions of TQM, CMA, and BNP.

**Rationale 3**- There are various approaches to empirical study with hypothesis testing and most of them are limited to factor analysis, regression analysis, and hypothesis tests. But these studies do not address multicollinearity, which may exist among the research variables. The most widely used approach to tackle this issue is the second generation statistical significance test. Therefore, this research adopts the use of Structural Equation Modeling (SEM) with Partial Least Square Method (PLSM). The rationale for this choice is the simple fact that partial least square path modeling is an analytic technique that runs Principal Component Analysis (PCA) and Regression Analysis (RA) simultaneously and is most effective in defining multicollinearity.

**Rationale 4**- A lot of importance has been given to TQM in the context of hospitals in India and it is under the assumption that it would lead to gaining of the CMA and enhance the BNP. However, there has been no single study
which empirically supports this point. Unless it is well justified, the large investment on TQM in terms of resources, training and infrastructure will be futile. So, the rational approach would be to develop a holistic model considering the links between all the associated dimensions of the constructs and test them empirically to check if the desirable outcomes are achieved. This can also be made use as the basis for recommending suggestions for improvement if shortcomings are observed.

1.9 Methods

The detailed explanation for the methods and the methodology used in this research and also the reasons for having chosen them is given in the chapter IV - Research Methodology. However, this section makes a note on the methods which prominently guide this research. This is basically an empirical study based on the questionnaire survey method. The method adopted for designing and developing the survey instrument is meta-analysis of literature. The metric used for collecting the primary data is in the form of a self-administered questionnaire using 5-point Likert scale. The questionnaire is used to collect both qualitative and quantitative data through open-ended and close-ended questions respectively. Semi structured interviews are also conducted to gain more information. The secondary data is collected through journals, periodicals, newspapers, doctoral theses, conference proceedings, and also informal interviews with the knowledge workers in the institutions where the study is carried out.

Statistical analysis is used to empirically test the theoretical relationships established through the meta-analysis of literature. This involves descriptive statistics: mean, standard deviation, skewness and kurtosis, inferential statistics: t-test, Multiple Regression Analysis (MRA), and Structural Equation Modeling (SEM) using the Partial Least Square
Modeling (PLSM). Inferences are drawn based on the results obtained through the statistical research. The implications and suggestions drawn are substantiated through the secondary source of data and qualitative information through primary data.

1.10 Basic Definitions

The terms used in this research have several definitions and are mainly context based. TQM is as such a manufacturing concept and the definitions are applicable to the production line based processes. Even though they have been modified to suit to the requirements of service industries in general, further modifications may be necessary to operationalize them in the context of hospitals. Thus, the definitions have been given in the context of this research as applicable to this thesis.

**Total Quality Management (TQM)** – Total Quality Management (TQM) is a way of managing people and business processes to ensure customer satisfaction at every stage. “It is essentially a way of organizing and involving the whole organization; every department, every activity, every single person at every level” (Lakhe & Mohanty, 1994.p.9).

**Top Management Leadership (TML)** – “Leaders working to establish unity of purpose and direction and create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives” (Patel, 2012, p.2). In this research it is the support given by the top management in the form of infrastructure, moral support, and constant encouragement to the employees in their quality endeavours.

**Customer Management (CMT)** - Customer management also known as Customer relationship management (CRM) is managing an organization’s interactions with customers, clients, and sales prospects. (Patel, 2012). In other words it is maintaining close contact with customers and building
relationships to satisfy them and repeat business and obtain positive referrals. It includes taking feedback from customers, assessing their requirements and addressing their complaints.

**Supplier Quality Management (SQM)** - Managing long-term, co-operative relationships with suppliers so that these relationships are mutually beneficial to both parties without any misunderstandings by maintaining systems in place to ensure the quality of incoming materials, and delivery performance of the suppliers, and to share this data with suppliers with adequate training for quality (Khanna, Sharma & Laroiya, 2011). In the context of hospitals it is maintaining close contact with suppliers, building relationships and continuously taking feedback, to make sure that they deliver the right goods in right quantity with the right quality.

**Continuous Improvement (CNI)** - A continual improvement process, also often called a continuous improvement process (abbreviated as CIP or CNI), is an on-going effort to improve products, services, or processes. These efforts can seek "incremental" improvement over time or "breakthrough" improvement all at once. Delivery (customer valued) processes are constantly evaluated and improved in the light of their efficiency, effectiveness and flexibility (Bhuiyan & Baghel, 2006). It is otherwise referred to as striving to improve the quality of service at all levels in the form of small improvements on a continuous basis.

**People Management (PMT)** - Enabling the employees to contribute meaningfully to quality processes and their continuous improvement, having an open culture, teamwork and making the employees fully aware of their roles, goals and responsibilities (Khanna et al., 2011). In the context of hospitals it is managing the human resources through efficient training, quality consciousness, team building etc., and having all the processes such
as appraisal, training need analysis etc. so that the employees may contribute to the growth of the organization.

**Process Management (PRM)** – Managing the processes in the hospital include documenting as per the quality requirements, reviewing of all aspects of processes and initiating remedial actions to the defective processes for effective quality management. It also involves the identification of key processes and improving them continuously to achieve better quality of products and processes (Khanna et al., 2011).

**Quality Information Management (QIM)** - Maintaining an efficient and effective system to collect the information related to quality like cost of quality data, scrap data, rework data and its use as it forms the base on which many quality activities take place. The information systems enable data to be collected in a timely fashion, transparently shared and used to provide feedback to employees. The information system outputs are also used for measuring performance. It involves the use of IT on quality management to the enhancement of quality awareness, in the improvement of product quality and in the reduction of quality costs. (Khanna et al., 2011).

**Organizational Learning (ORL)** - Organizational learning is a characteristic of an adaptive organization, i.e., an organization that is able to sense changes in signals from its environment (both internal and external) and adapt accordingly (Nonaka & Ikniujo, 1994). Thus it make the organization learn from the self-experience and self-reflection and promote the individual and group learning.

**Competitive Advantage (CMA)** - Competitive advantage is an advantage gained over competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar, or possibly higher, and prices (Porter, 1985). The gaining of the
competitive advantage is mainly measured by the product differentiation, cost leadership, and superior performance. In the context of this research both product differentiation and cost leadership are considered as the dimensions of competitive advantage.

**Product Differentiation (PRD)** - It is a strategy to make the product or service different from competitors’ products or services. Thus, consumers see the service as unique among a group of similar competing services. The product or service may be differentiated by emphasizing quality, a high level of service, ease of access, convenience, reputation and so on. Successful product differentiation creates a competitive advantage for the organizations, as customers view these products/services as unique or superior.

**Cost Leadership (CSL)** - It is a positioning strategy designed to gain an advantage over competitors by producing a product or providing a service at a lower cost than competitors’ offerings (Pond, 2006). It is aggressive construction of efficient-scale facilities, vigorous pursuit of cost reductions from experience, tight cost and overhead control, avoidance of marginal customer accounts, and cost minimization in areas like R&D, service, sales force, advertising, and so on (Abdullah, 2013). Cost leadership allows for more flexibility in pricing and relatively greater profit margins.

**Business Performance (BNP)** - There are several measures of performance of an organization and it varies from tangibles to intangibles and from financial to non-financial measures. Sustainable BNP of the hospitals is achievable only when the hospitals have efficient operational performance (OPP), financial performance (FNP), and non-financial performance (NFP).

**Operational Performance (OPP)** - It is taking good measures for cost and waste reduction, improving delivery performance and enhancing quality (Sila, 2007; Minna, 2014).
Financial Performance (FNP)- It is the growth of revenue, net profit, return on assets etc., which indicate that the financial position of the organization is getting better continuously (Chih & Chih, 2014; Lai, Aziz & Chan, 2014).

Non-financial Performance (NFP) - Investments for future growth such as investment in R&D, building competitive profile, market development etc., which are future performance oriented (Wong, 2014; Zuriekat, Salameh & Alrawashdeh, 2012).

1.11 Research Contribution

The research contribution has been explained in detail in the research findings in Chapter VI, however, they have been briefed here for the general understanding of the contributions made by this research.

First, this research has significant contribution to the body of knowledge in the area of TQM implementation in the healthcare organizations with specific reference to hospitals. This research has contributed a tested and validated metric for the measurement of TQM practices, CMA and BNP which can be used both by the academics and the practitioners. It has established the link between these factors through a systematic meta-analysis of literature. Second, this research has developed a structural model which links TQM practices to gaining of the CMA and improvement in BNP. This research has tested these relationships based on the primary data collected from the private and public sector hospitals in the State of Kerala. Even though the study is based on a sample chosen in a place in India, the results can be generalized to considerable extent as the practices in these hospitals in connection to the TQM implementation are universal in nature. The various links established between the dimensions of study through this empirical research can be the reference for future research in these areas.
The research has also contributed a TQM Model for the hospitals which can be used by both the hospitals which have already implemented TQM to fine tune their TQM dimensions and the hospitals which are planning to implement the TQM as it provides a clear understanding about the dimensions which need to be considered during the TQM implementation. Finally the implications and suggestion drawn based on the study results can be used by the strategic planners of TQM implementation in hospitals so that they can make the system more robust and efficient.

1.12 Limitations of the Study

The researcher did confront certain limitations as she went about with her research work. The important ones are given below.

1. First of all, the researcher encountered some difficulty in getting an easy access to some of the prestigious healthcare entities in the study area. And only ten organizations were taken up for the study, four in public sector and rest in private sector. And the surveys were conducted at the supervisory level only. It was observed that the instrument developed for the study consisted of several statements which require proper logical reasoning and understanding and hence it may not be appropriate to administer this instrument to lower level employees to assess their perception.

2. Though the respondents of this study belonged to supervisory categories, still they might not provide reliable response due to lack of proper knowledge about TQM. Both the top Management and the middle management members who are the back-bone of the healthcare institutions could also have had reservations in sincerely expressing their views. The respondents might not have been really objective with regard to their responses as the topic is quality related and have a fear
of revealing quality issues of the institutions which may in turn affect their image.

3. This research adopted mixed methods of research with both qualitative and quantitative components. The qualitative data and information collected through questionnaire and the semi-structured interview is subjective to a considerable extent, which limits the reproducibility of the study. The quantitative analysis was mainly through statistical procedures and therefore all the limitations of statistical methods are also applicable to this research.

In spite of these and other limitations, the researcher had earnestly tried to make the study as objective as possible.

1.13 Outline of the Thesis

The thesis is divided into six chapters and the contents of the chapters are briefed in the following paragraphs.

Chapter 1 – Introduction

This chapter provides the background to the research and introduces the research areas in brief. The significance for the study is explained. The chapter records the problem statement and the research questions. The research aim and the objectives of this research are presented in this chapter. There is also a mention on the rationale of this research. To have a clear understanding of the tools and techniques used in this research, the methods adopted have been briefly explained in this chapter. Having realized the variation in the definitions of the key constructs used in this research based on the context of use, a clear set of operational definitions have been given which are applicable to this research. Finally the contribution of this research, limitations and the outline of the thesis is provided.
Chapter 2 – Literature Review

The chapter presents a thorough discussion on the research constructs – TQM practices, Competitive Advantage (CMA) and Business Performance (BNP) and review contemporary research so as to identify the dimensions and the associated variables. The dimensions are discussed in detail and the research undertaken in each of the dimensions is explained in brief. The chapter ends with the review summary and the identification of the research gap.

Chapter 3 - Total Quality Management - Theoretical Background, Conceptual Model and Hypotheses

This chapter elaborates the theoretical and the conceptual framework connected with the research variables. It explains the process of arriving at the hypothetical structural model. Based on the theoretical models and the linkages established between the various dimensions of the study, a total of 40 hypotheses have been postulated and presented both in the form of null and alternative hypotheses.

Chapter 4 - Research Methodology

The research methodology adopted in this research has been explained in this chapter and wherever applicable the reasons for having chosen a particular method among the available methods have been highlighted. This chapter discusses the nature of research and the variables involved. The methods used have been explained. The rationale for the sample selection has been discussed and the methodology adopted in the preparation of self-administered survey questionnaire has been explained. The procedures adopted for reliability and validity study have also been reported. The data collection process in the hospitals has been explained.
The statistical procedures adopted have been listed. In conclusion, the limitations of the methods have also been listed.

**Chapter 5 - Analysis and Results**

The descriptive statistics, measurement and structural models, hypothesis testing, and presenting of the results has been undertaken in this chapter. The reliability and validity of the test instrument, the model constructed using the Partial Least Squares (PLS) approach, viz., measurement and structural models have been explained in detail. The Multiple Regression Analysis has been presented. The results of the hypotheses testing have also been presented.

**Chapter 6 - Research Findings and Conclusions**

The findings, summary, and the conclusions of this research are reported in this chapter. The significant contributions of the study have been explained. Based on the findings, suggestions and implications have been drawn. The TQM Model for Hospitals developed through this research has been explained. Finally, the chapter ends with the general conclusions of this research, and future scope to extend this research.

**1.14 Summary**

This chapter is the introduction to this research. It has started with the background to the research and introduced the areas of research interest in this study. The significance of the research has been discussed to emphasize upon the importance of undertaking this research which seeks interrelationships between the research variables which otherwise have been dealt mostly theoretically. The problem has been identified and stated in a structured manner which has led to the research questions. To tackle these questions well-defined objectives have been framed and listed in this chapter. Rationale for choosing this direction for research, and the methods
used in this research have been highlighted. Basic definitions as applicable to this research have been given for standardization purpose of the terms used in the context of hospitals as a service sector. Research contributions and the limitations of the study have been listed. Finally, the outline of the thesis has been presented to facilitate reading.

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