3.1 Overview

This chapter elaborates the theoretical and the conceptual framework connected with TQM. At the very outset the chapter highlights the significance of quality management in general and healthcare industry in particular. Historical evolution, definitions and the benefits of TQM is systematically presented. Besides, the TQM initiatives in Indian healthcare and the leadership role in TQM implementation in hospitals is highlighted. The conceptual model of this research has been explained with its individual components i.e., TQM practices, CMA and BNP. In accordance with the conceptual model, the links between various constructs of the study have been established and the hypotheses thus developed are listed in this chapter. The research hypotheses formed in this chapter are the basis for the construction of the structural model that is empirically tested in this research, which will be discussed in the subsequent chapters.

3.2 Significance of Quality Management

Quality holds the key to competitiveness in today’s global market, regardless of the nature and size of the organizations. It is an important parameter for every business and should not be ignored at any cost. Therefore Quality management has been recognized as an important area by organizations worldwide. The orientation of the business, these days is centered on the most valuable element called the customer. This is precisely because, the customers become increasingly choosy in deciding the products
and services, they can avail themselves of. Thus the product and services that maximizes the satisfaction of the customer will be preferred. This fact is recognized by the world all over, especially by leading companies, who realize that they must reach these highly conscious, technology enabled customers and as a result the traditional marketing techniques takes a back seat. Instead products, services and corporate cultures that inspire, include and reflect their customer’s values are evolved. As a result, over the past 60 years, marketing has moved from being product centric to being customer centric (Kotler, Kartajaya & Setiawan, 2010; Sukumar, 2014).

Making quality a priority means putting customer needs first. It means meeting and exceeding customer expectations by involving everyone in the organization through an integrated effort. The customers are intolerant of the poor quality of the goods and services. Therefore an organization must give its customers a quality product or service that meets their needs, at reasonable price, with on-time delivery and outstanding service. All over the world, the business community has recognized that customer satisfaction is indispensable for its success. Listening to the ‘customers’ and responding quickly to their changing needs, expectations and perceptions leads to improved customer satisfaction and which in turn leads to customer loyalty and this results in improved business performance and profitability. Organizations that engage in a relentless pursuit of delivering high quality products and services outperform those who do not (Defeo & Juran, 2010; Sukumar, 2014). Recognition of ‘quality’ leads a firm to sustainable development (Sukumar, 2014). The cost of quality is the expense of doing things wrong. As a result the business organizations have increased consciousness about the potential of ‘quality’ as a strategic weapon for competitive advantage and better business performance. Therefore Quality should be clearly defined and understood by everyone in the organization.
3.2.1 Concept of Quality

The word ‘Quality’ is a relative term, and it will change its meaning depending on the customer’s needs. As is said “Beauty lies in the eyes of the beholder”, in the same manner, quality is perceived differently by different people. Hence, defining quality is not as easy as it may seem, because different people have different ideas of what constitutes high quality. When asked what differentiate their product or service, the banker will answer “service,” health care worker will answer “quality health care,” the hotel restaurant employee will answer “customer satisfaction,” and the manufacturer will simply answer “quality product.” When pressed to provide a specific definition and measurement, few can do so.


1. **Transcendental View of Quality:** Those who hold transcendental view of Quality would say, “I can’t define it, but I know when I see it.” Advertisers are fond of promoting products in these terms. “Where shopping is a pleasure” (supermarket), “It means beautiful eyes” (cosmetics) are example. In these definitions quality is synonymous with excellence.

2. **Product-Based View:** In Product based definitions quality is determined objectively. Quality is viewed as quantifiable and measurable characteristics or attributes. For example, the durability or reliability of a product.

3. **User-Based View:** User based definitions are based on the idea that quality is an individual matter, and products that best satisfy their
preferences (i.e., perceived quality) are those with the highest quality. Excellence in quality lies in the eyes of the user or customer.

4. **Manufacturing - Based View:** Manufacturing-based definitions are concerned primarily with engineering and manufacturing practices and use the universal definition of “conformance to requirements.” Requirements, or specifications, are established design, and any deviation implies a reduction in quality. The concept applies to services as well as products. Excellence in quality is not necessarily in the eye of the beholder but rather in the standards set by the organization.

5. **Value - Based View:** Value-based quality is defined in terms of costs and prices as well as a number of other attributes. Thus, the consumer’s purchase decision is based on quality at the acceptable price.

3.2.2 **Definition of Quality**

Thus when people focus on the different dimensions of quality, there emerge a diverse set of definitions (Sukumar, 2014). Quality can be interpreted as "Customer's expressed and implied requirements are met fully" (Ho, 1999). This is a core statement from which some eminent definitions of quality have been derived. There are a number of well known quality definitions. The following are some of the most common definitions of quality.

- Quality is fitness for use (Juran, 1979).
- Quality is conformance to requirements (Crosby, 1979).
- Quality is a predictable degree of uniformity and dependability at low cost and suited to the market (Deming, 1982).
Quality is in its essence a way of managing an organization (Feigenbaum, 1983).

Quality is meeting customer requirements (Oakland, 1989).

Quality is to satisfy customers’ requirements continually (Kanji, 1990).

Quality is the totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs (International Standard Definition, ISO 8402, 1994).

Thus the definition of quality has evolved from a product based definition which originated in the manufacturing sector to a customer based definition which incorporates service both within the service sector and also the service element of manufactured products. It is important to note that satisfying the customers' needs and expectations is the main factor in all these definitions. From these definitions it is very clear that the concept of quality was quite narrow in earlier thinking and referred only to product specifications. A product is said to have quality, if it can satisfy the stated or implied needs. Management expert like Crosby opined that quality can be achieved by “conformance to requirements” (Crosby, 1979). But some Japanese companies firmly believes that conformance to a particular standard gives a very narrow meaning to quality and consequently have started to use a newer definition of quality as "providing extraordinary customer satisfaction". This 'extra-ordinary customer satisfaction' or 'delighting the customers' is a trend in modern day quality management (Ho, 1999). Organizations worldwide have been exploring different ways to provide the extra ordinary delight to their customers.

3.2.3 Concept of quality in health care

The focus on improving the quality of healthcare is not new. Contrary to popular belief; the TQM movements were not the start of concerns about
quality in healthcare. In 1517 the founding charter of the Royal College of Physicians emphasized the need for members to set and maintain standards of practice ‘for their own honour and the public benefit’. The quality assurance initiatives in healthcare were also taken place during the time of Florence Nightingale. During the Crimean War (1854-1856), when the introduction of nutrition, sanitation and infection control initiatives in war hospitals contributed to reduction in the death rate from 43% to 10 % (Patel G, 2009). However, over the past 20 years improving the quality and safety of healthcare has taken on new importance worldwide.

According to Rakich (2000) the concept of quality is difficult to define in the service industry. In the health-care industry, the concept is even more difficult to define, as there are many participants involved in the delivery of health care, and each having his/her own interest in point. For example, management is likely to consider cost containment as the most important thing in assessing the quality of health-care delivery; while for the patient the degree of recovery of his/her initial state of health will be the most important thing. However, providing excellent service to a customer with some combination of illness, pain, anxiety and fear can be challenging. Moreover, hospitalized patients are often accompanied by anxious family members who are also customers and they also must be served. Therefore to enhance patient’s satisfaction and perception of value, health care organizations need to incorporate service quality principles in their day to day activities.

According to Dodwad (2013) Quality in healthcare can be defined in many ways.

“Quality” in healthcare is defined as everything the healthcare organization undertakes to fulfill the needs of its customer, be it the patient,
the payer, the admitting doctor, the employer, or an internal customer within the organization.

“Quality is doing the right things for the right people at the right time, and doing them right first time and every time.”

‘Quality can refer to the technical quality of care, to nontechnical aspects of service delivery such as clients’ waiting time and staff’s attitudes, and to programmatic elements such as policies, infrastructure, access, and management.’

He also explains the various dimensions of health care quality as Technical performance, Effectiveness, Efficiency, Access, Amenities, Relevance and Choice. The Institute of Medicine outlined Six aims for Improvement for health care in their report ‘Crossing the Quality Chasm: a New Health System for the 21st Century’ (IOM, 2001). The dimensions of care listed down in this report were, safe, effective, family centered, timely, efficient and equal .All these dimensions of care best represent quality care and improvement efforts in an organization, and careful attention to service is the right thing to do for the customer and, in a health care system it in turn benefits the organization.

3.3 Total Quality Management (TQM)

The quality improvement movement in general and total quality management in particular have become very popular during the past few decades. The stiff competition in the domestic and in the global market had led to this movement. In response to increase global pressures, customers’ demanding superior quality of products and services, the global marketplace has become very competitive, and as a result many organizations have adopted various quality improvement initiatives in order to gain and retain customers. In the early years of the quality trend, the focus on quality was
structured around quality circles (Barra, 1983), quality control and quality assurance (Ishikawa, 1991). In the late 1980s and early 1990s, the definition of quality shifted its emphasis to a broader sense and was defined and driven by customer demand and satisfaction (Deming, 1986). Since the 2000s, quality has often been referred to as the “Lean Six Sigma” process improvement management (Thomsett, 2005). Recently, “New Gold Standard” another quality improvement initiative which has been mostly used in the service and hospitality industry (Michelli, 2008). However, whatever the names that have been used by any specific industry, they all refer to quality as continuous improvement processes with a focus on the customer (Ho, 2011).

Thus there are numerous approaches of Quality Management in order to help industries improve efficiency and competitiveness through improvement of quality with a focus on the customer. Among them one of the most popular and often recommended approaches is the philosophy of TQM that seeks to integrate all organizational functions to focus on meeting and surpassing customer’s requirements and organizational objectives (Talib, 2013). TQM is concerned with the integration of all the efforts in the organization towards quality improvement, quality development and quality maintenance to meet full customer satisfaction at all economical levels. Also, TQM delights customers, both external and internal by meeting their expectations on a continuous basis as it involves everyone in the organization to work for continuous improvement in all products or processes through a problem solving methodology. TQM encourage each individual to participate, contribute and offers to present suggestions for improvement. It is intended to promote continuous and sustained improvement in quality and performance, and develops an attitude of quality culture (Talib 2013; Talib, Rahman & Azam, 2011). One of its basic
principles is that the cost of prevention is less than the cost of correction (Talib, 2013). Thus TQM is a management philosophy which believes in preventing poor quality products and services rather than simply to detect and sort out defects.

Many scholars claim that the basic features of TQM, such as customer satisfaction, quality control, continuous improvement and learning, teamwork, statistical thinking etc. are easily applicable to organizations operating in any sectors of the economy such as manufacturing and service, government and private. The application of TQM concepts in these sectors results in improved products and services, more satisfied customers and employees, reduced costs, improved financial performance, enhanced competitiveness, and increased productivity (Jaafreh & Al-abedallat, 2012). Thus TQM has taken a strong place in all sectors and emerged out as an approach for process improvement, waste reduction, business optimization and quality performance (Talib, 2013). Hence TQM can be considered as a concept having universal application without any border barriers (Sukumar, 2014).

3.3.1 Evolution of TQM

The concept of quality has existed for many years, though it’s meaning has changed and evolved over time. In the early twentieth century, quality management meant inspecting products to ensure that they met specifications. In the 1950’s and 1960’s Quality Control was the key, the emphasis being on inspection, finding faults, reworking or scrapping the defective product, repairing the fault and ensuring that the fault did not reoccur (Garvin, 1988). A movement then occurred in 1970’s and 1980’s which concentrated on prevention measures and thus emerged the popular term ‘Quality Assurance.’ The advance of Quality Assurance led to the
development of quality systems and the development of quality system standards e.g. ISO 9001. This promoted consistency of product or service and compliance with the standard. In the next step, with the help of so called “Quality Gurus”, the concept took on a broader meaning. Quality began to be viewed as something that encompassed the entire organization, not only the production process. This step in the evolution of quality was improvement, and in order to achieve not just improvement but continuous improvement the concept considered all parts and activities of the organization and also involved all the employees in the organization. This stage of evolution led to the concept of ‘Total Quality Management’ which is defined as follows: Total Quality Management is a management approach of an organisation, centered on quality, based on the participation of all its members and aiming at long term success through customer satisfaction, and benefits to all members of the organisation and to society (ISO 8402, 1994:17). Thus the four stages in the evolution of quality are Inspection, Quality Control, Quality Assurance and Total Quality Management (Butler, 2009). Garvin (1988) refers to these four stages as quality eras.

According to Yong and Wilkinson (2002), TQM is the phase of quality management we are witnessing today and has emerged as a critique of previous forms of quality management. It is one of the most dominating and pervasive managerial approaches widely implemented throughout the world across different industries and sectors, and the implementation has given them many positive results. Firms are using this philosophy to achieve competitive advantage and enhanced business performance.

3.3.2 TQM definitions

A variety of definitions of TQM have been offered over the years by different authors. However, there is still no universal agreement on these
definitions. It is generally accepted that the contemporary TQM literature evolved from works of ‘Quality gurus’ such as Deming, Juran, Feigenbaum and Crosby, but there is not only one standard definition of TQM (Talib et al., 2012).

**Different definitions of TQM as reported in literature**

TQM, a management philosophy which develops all management principles and practices from the belief that continual improvement of quality is the key to success (Deming, 1986).

TQM is an approach for improving the competitiveness, effectiveness and flexibility of an organization (Oakland, 1989).

TQM a new way of managing to improve effectiveness, flexibility and competitiveness of a business to meet customer’s requirements (Oakland, 1993).

TQM, a management process which any organisation can implement through long term planning, by using continuous quality management plans which lead the organisation towards the fulfilment of its vision (Dahlgaard et al., 1998).

Total Quality Management (TQM) is an integrative management philosophy aimed at continuously improving the quality of products and processes to achieve Customer satisfaction (Joseph et al., 1999).

Total quality Management is a strategic approach to the development and implementation of a management system which incorporates innovation and continuous change through the involvement of all employees in the provision of quality products and/or services to its customers (Butler, 2009).

An analysis of these definitions suggests that, after all, they are not very different. The general principles that guide the TQM philosophy are
management commitment to quality, continuous improvement, customer focus, employee empowerment and root cause corrective action. Some TQM authors also emphasize on statistical thinking, value improvement and supplier quality as well.

3.3.3 Benefits of TQM

TQM is not an overnight cure for an organisation’s quality problems. The TQM implementation effort has a beginning, but if implemented properly, it does not have an ending. As long as TQM is adopted fully and practiced effectively in an organisation, many advantages will be delivered. It will strengthen the organisational business performance and competitive advantage. The successful implementation of TQM will result in tangible and intangible benefits to the organization and are well acknowledged. Findings of the study by Kumar, Garg and Garg (2011) reported that there was a positive impact of TQM implementation on different dimensions of organization’s performance, i.e. employee relation, operating procedures, customer satisfaction and financial results. This was also claimed and supported by Yang (2006).

Talib, Rahman and Qureshi (2012) cite a list of selected benefits of TQM. This include

1. Reduced cost of operation
2. Improved employee involvement
3. Improved communication
4. Increased productivity
5. Improved quality and less rework
6. Improved customer satisfaction
7. Improved sustainable competitive advantage
8. Promoting continuous improvement and innovation
9. Enhanced customer service and loyalty
10. Improved organizational management
11. Improved employee relations and satisfaction
12. Improved financial performance
13. Improved process and performance management
14. Improved products and services
15. Improved employee morale and reduced errors
16. Increased social responsibility and ethics

Due to its strong impact on business performance, customer satisfaction and profitability (Talib, 2013) TQM can offer a number of benefits to practicing organizations, and thus it has become a major area of attention to practitioners, managers and researchers.

3.4 TQM Initiatives in Indian Healthcare

3.4.1 Overview of Indian Health Sector

Healthcare is one of India’s largest sectors, in terms of revenue and employment, and the sector is expanding rapidly. According to India Brand Equity Foundation (IBEF, 2015) report, the overall Indian healthcare market today is worth US$ 100 billion and is expected to grow to US$ 280 billion by 2020, with a compound annual growth rate (CAGR) of 22.9 per cent. With a healthy CAGR, healthcare as an industry in India has emerged to become one of the most promising and progressive sectors in recent times. The growth of the healthcare industry has been fueled largely by the growing and ageing population, rising economy, rising income level, greater
health awareness, increased precedence of lifestyle diseases and improved access to insurance.

Indian healthcare administration is governed by the Ministry of Health and Family Welfare. Both public and private sector is involved in rendering health care services to the population in the country. The public health system in India comprises of all the state owned health care facilities and it include All India Institutes of Medical Sciences, Regional Cancer Centres, Government Medical Colleges, District Hospitals or General Hospitals, Community Health Centres and Primary Health Centres. Governmental spending on health care in India is exclusively through the public health system, hence most of the treatments in these institutions are either fully or partially subsidized. Some of the major healthcare service providers in the public sector include All India Institute of Medical Sciences, New Delhi, Armed Forces Medical College, Pune, Madras Medical College, Chennai, Maulana Azad Medical College, New Delhi, Stanley Medical College, Chennai, Grant Medical College, Mumbai. While the private sector accounts for almost 74 per cent of the country’s total healthcare expenditure. It has emerged as a vibrant force in India's healthcare industry recently, lending it both national and international repute. And some of the well-known hospitals in the private sector include Apollo Hospitals, Wockhardt hospitals, Fortis Healthcare, Max Healthcare, Aravind Hospitals, Manipal Group and Escorts Group (ASA, 2012). Apart from this the healthcare sector in the country employs 4 million people directly or indirectly. In terms of the human and physical infrastructure, for 1000 population, Indian healthcare providers have 1.5 beds (world average 3.3), 1.2 physicians (world average 1.5), 1 nurse (world average 3.3). Approximately about 5, 92, 215 doctors, 80,000 dentists and 7, 37, 000 nurses in the country in 4,049 public hospitals.
and 11,344 private hospitals and 170 medical colleges. So, about 1,409,215 employees are offering service to the patients (Hussain, 2015).

The past few years in Healthcare Industry in the country have been marked with dramatic changes. The Public Sector is encouraging private investment in the healthcare sector and is now developing Public – Private Partnerships i.e. PPP models to improve availability of healthcare services and provide healthcare financing. Both sectors have also undertaken initiatives to improve functional efficiencies in the form of Accreditations, Clinical research, Outsourcing of non-core areas, increased penetration of healthcare insurance and third party payers (KPMG, 2011). Telemedicine is a fast-emerging trend in India and some major hospitals (Apollo, AIIMS, Narayana Hrudayalaya) have adopted telemedicine services and entered into a number of public-private partnerships (PPP). The telemedicine market in India is valued at US$ 7.5 million currently and is expected to grow at a CAGR of 20 per cent to reach US$ 18.7 million by 2017. About 60 percent of the global clinical trials market is outsourced to developing countries like India. Indian generic pharma companies like Daiichi Sankyo, Dr Reddy’s along with the global players such as Pfizer and Merck are involved in the outsourcing in the Indian market. Hospital chains are venturing into contract research to reduce their operational and clinical costs. Fortis Healthcare has become the latest entrant in contract research with its Fortis Clinical Research Services. Clinical research in many specialties has led to improved disease management and patient care, reduced ALOS (Average length of Stay), better BTR (Bed Turnover Rates) making healthcare delivery more sustainable. This also significantly improves the DALY (Disease Adjusted Life Years). The private sector has evolved a multi-pronged approach to increase accessibility and penetration. It has tackled the issue of Lifestyle related diseases with the development of high-end tertiary care facilities. Also new delivery models
such as Day-care centers, single specialty hospitals, end-of-life care centers, etc. are on the horizon to service larger sections of the population and address specific needs (Hussain, 2015).

Further, presence of world-class hospitals and skilled medical professionals has strengthened India’s position as a preferred destination for medical tourism. The Government of India aims to develop India as a global healthcare hub. It has created the National Health Mission (NHM) for providing effective healthcare to both the urban and rural population. The Government is also providing policy support in the form of reduced excise and customs duty, and exemption in service tax, to support growth in healthcare. Investment in healthcare infrastructure is set to rise, benefiting both ‘hard’ (hospitals) and ‘soft’ (R&D, education) infrastructure (IBEF, 2015). Thus the Indian healthcare industry is seen to be growing at a much rapid pace than it was anticipated before (Masetti, 2011). Therefore, the healthcare industry of India is ultramodern and has initiated many programmes to improve the quality of service rendered by these entities.

3.4.2 Quality Driven Approaches in Indian Health Care

In India, the past few years have witnessed an increasing concern over the quality of healthcare services. The government policies have significantly changed the healthcare scenario in India. Quality has been shown to be an important element in the consumers’ choice of hospitals. In light of these changes, there is an emerging need to improve the quality of healthcare services. Further, the changing market and accreditation pressures have motivated hospitals to implement quality management concepts. Thus it has become an imperative for healthcare institutions in India to guarantee quality healthcare to all. Even though various initiatives have been taken to
improve the quality to acceptable levels, they have seen only partial success till now. A few such initiatives include:

- **Accreditation of healthcare facilities**

Accreditation, Certification (e.g., ISO 9000 standards) and Licensure ensure quality standards for healthcare organizations in the country. Accreditation Bodies Present in India include Joint Commission International (JCI), National Accreditation Board for Hospitals & Healthcare Providers (NABH) & National Accreditation Board for Testing and Calibration Laboratories (NABL).

Joint Commission International (JCI), is an international accreditation agency works to improve patient safety and quality of health care in the international community by offering education, publications, advisory services, and international accreditation. Currently JCI surveys nearly 20,000 health care programs all over the world, through its voluntary accreditation process. Following are few of the JCI Accredited Organizations in the country Indraprastha Apollo Hospital, Delhi, Apollo Hospital, Chennai, Apollo Hospital, Hyderabad, Asian Heart Institute, Mumbai, Shroff Eye Hospital, Mumbai, Wockhardt Hospital, Mumbai, Fortis Healthcare, Mohali (IBEF, 2007).

National Accreditation Board for Hospitals & Healthcare Providers (NABH) and National Accreditation Board for Testing and Calibration Laboratories (NABL) are constituent boards of Quality Council of India (QCI), play a pivotal role in propagating, adoption and adherence to quality standards in the healthcare sector in the country. Few of the NABH accredited Hospitals in the country are B.M. Birla Heart Research Centre, Kolkata, MIMS Hospital, Calicut, Max Super- Specialty Hospital, New Delhi, Max Devaki Devi Heart and Vascular Institute, New Delhi, Kerala
Institute of Medical Sciences, Thiruvananthapuram, General Hospital, Ernakulum. NABL provides laboratory accreditation services to laboratories that are performing tests/calibrations in accordance with ISO/IEC 17025:2005 and ISO 15189:2007 for medical laboratories. The accreditation process has brought in freshness and a new work culture in the concerned hospitals/ laboratories where there is a sense of collective responsibility and genuine motivation among all staff members to provide quality services.

- **Use of technology in Healthcare**

  There is an extensive usage of IT driven tools and services in Healthcare that improve the diagnosis and treatment. Example; Hospital management systems, Decision support systems. Apart from this Telemedicine services is used by major healthcare providers to provide quality care especially in eye, cardiac and other surgeries.

- **Health Cities: The Evolving Concept of Healthcare in India**

  Major corporate hospital groups in India are making significant investments in setting up state-of-the-art Health Cities in major Indian cities. Around 15-20 Health Cities are expected to come up in India in the coming years.

- **Education, Research & Development**

  Greater emphasis being placed upon Education, Research & Development in health care. The benefits include improved patient outcomes, enhanced provider satisfaction, and more effective utilization of resources.
• **Drug control regulatory mechanisms**
  
  Strong drug control regulatory mechanisms and effective actions against counterfeit drug manufacturers have helped improve overall quality of medicines.

• **Skill up gradation training**
  
  Development and implementation of skill up gradation training for doctors, nurses and paramedical staff to improve availability of skills and support implementation of standard operating procedures has significantly improved the quality of care.

• **Use of ASHA (Accredited Social Health Activist)**
  
  Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant women. Use of ASHA (Accredited Social Health Activist) under the scheme promotes awareness and use of public healthcare facilities especially for deliveries. This has had a positive impact on increased institutional deliveries, an important factor for preventing maternal and infant mortality.

3.4.3 **Quality Improvement Initiatives in Kerala**
  
  Kerala's achievement in the field of health care is well appreciated, as its health standards are almost comparable to those of the developed countries in the World. Kerala is considered as a model to be emulated not only by the rest of the country but also by other developing countries of the world for maintaining high health standards with low levels of per capita income. Kerala's high health status is reflected through low birth, death and infant mortality rates, and the long life expectancy. With respect to these
rates, Kerala stands far ahead of all India averages and the growth in health sector in the state is being driven by both the public and the private sector. Allopathy (39.1), Ayurveda (33.2%) and Homeopathy (24.3%) institutions, the three major systems of Medicine that are popular in the state, form a significant share of the total medical sector in Kerala (India Environment Portal, 2010). The allopathic system of medicine under the government encompasses both the rural and the urban areas. The rural public health care sector provides preventive and curative care to the rural population through its Primary Health Care Centres, Sub-Health Centres, Maternal and Child Welfare Centres, Maternity Homes, Community Welfare Centres and Family Planning Centres. Hospitals at the urban areas comprise Medical College Hospitals, district/general hospitals and taluk hospitals which provide outpatient and in-patient treatment. The Ayurveda and Homeo systems of medicines under the government consist of dispensaries at the primary level and hospitals at the secondary level.

During the last few years the State has been able to initiate many programmes to improve the quality of services provided by these institutions. Some of these initiatives include:

- **Aarogya Keralam**

  Aarogya Keralam, National Rural Health Mission Kerala, is a quality initiative by the Kerala state Government which has revolutionized the public healthcare in the state. Today, with its many initiatives, Aarogya Keralam has started its impact on the health sector in the state. The main components of this initiative include augmentations of female health activists, village health plans, raising the standard of rural hospitals to Indian Public Health standards and integration of programs for optimum utilization of funds. Aarogya Keralam had undertaken many initiatives to improve the
healthcare standards in the state. This include Need assessment surveys conducted to assess the critical gaps in human resource, Up gradation of the CHCs and PHCs etc. The program was adapted to suit local challenges and this has resulted in a huge impact on the state health indicators. Today Kerala has the lowest maternal mortality rates and highest rate of institutional deliveries. This is an endorsement of the high quality of public healthcare in the state.

• **Kerala Accreditation Standards for Hospitals (KASH)**

   It is a quality improvement program initiated by the government and is intended to ensure that all public sector hospitals in the state deliver an optimum level of services. KASH seems to have drawn inspiration from the new environment in the government hospitals that have gone through or are going through the National Accreditation Board for Hospital and Healthcare Providers (NABH) accreditation process. Under KASH, government hospitals will receive accreditation from the State if these fulfill certain criteria. Patient care, patient safety, infection control, medication safety, and equity in delivering healthcare are some of the main components of KASH. The programme was initiated as it will be too expensive process for any government to bring up all its hospitals to meet the stringent standards of NABH (KASH to initiate quality improvement in hospitals, 2012).

3.5 **TQM Leadership**

   There are many sources that explain the theory of the Total Quality Management (TQM) process of the firm. Leadership puts these principles into action. Without sound leadership, the quality control process would be likely far less effective. A firm may have all the industry "best practices" employed, but it is the internal leadership that takes the quality management to a level that will put the firm in the best possible position to succeed. In
TQM implementation in hospitals, leadership role is very significant as it can affect all the rest of the TQM implementation dimensions in one way or the other. According to Clemmer and McNeil as cited by Nwabueze (2011), it is basically the prerogative of the leader to implement TQM in hospitals for the effective way of achieving the organisational goals. The effective leader is one who is able to motivate and apply the intellectual resources available within an organization to the attainment of set goals, which may be needed to consistently meet the needs of the customers. However, to consistently meet the organisational goals is possible only when a set of employees build the right systems and practices with inbuilt mechanisms to auto correct any deviations from the set path of functioning and monitor the systems closely. This is because the systems cannot run by themselves but need people to run it. Ultimately, the end result of effective systems and practices is measured by the growth of the business over a period of time and the sustainability of the business. It is in this context the two constructs of research interest emerge out, namely the Competitive Advantage (CMA) and the Business Performance (BNP). What is required in a business, in today’s customer driven market is, irrespective of the nature of the business i.e., whether it is a manufacturing or service organization, it should have the right enablers of business performance and the tools to gain the competitive advantage in the market. One of the time tested enablers is TQM and the hospitals have considered it as an option to enhance their system effectiveness. So, the role of the effective leader is that he/she must be able to activate a cross-functional team during the TQM life cycle and accomplishes the overall objective of the business on time with everyone involved. TQM leadership is therefore about the presence of a process that is carried out within an organisational role that assumes responsibility for ensuring that the process deviations are minimum from the set standards (Sabella et al., 2014). It is
also important to study if the TQM implementation ensures sustainability in business and if not the amount of time, effort, and all the resources spent on its implementation is a sheer waste (Mosadeghrad, 2014). Again, the point to be noted is that there are two stages in which TQM effectiveness will have to be measured. The first is to test if TQM implementation on the overall basis influences the CMA and BNP and the second is to test if the individual dimensions of TQM influence the individual dimensions of CMA and BNP. This two-stage approach will be necessary because if TQM has failed on the overall basis, say there will be a need to check if all the components of it are not working or are there any weak links which need to be strengthened. Further, if some of the components of the TQM have failed, have they failed in influencing all the components of CMA and BNP or some of the components of it? Thus, a series of authors have established the linkages between the various dimensions of the TQM and those of CMA and BNP, which are discussed next to lead to the development of the hypothetical research model.

3.6 The Conceptual Model

The TQM literature provides ample evidence for the linkage of TQM to performance. The conceptual model that emerged out in this research as a result of the identification of the research gap is oriented toward three constructs, viz., TQM practices, Gaining of the Competitive Advantage (CMA), and enhancement of Business performance (BNP). (Figure 3.1).
The literature review has made the point clear that TQM is an enabler to the gaining of the CMA and enhancing the BNP. This relation has been established strongly in the manufacturing industries, but there is no clear evidence for the empirical proof for the establishment of this relation in the context of service industries in general and hospitals in particular. So, this research considers the TQM practices as the enablers of gaining of the CMA and enhancement of BNP in the case of service sectors as well.

### 3.6.1 TQM Practices

Studies have suggested quite a large number of factors/elements/constructs/dimensions of TQM implementation. Many authors have identified TQM as a set of practices such as continuous improvement, meeting customer requirement, reducing rework, long range thinking, increased employee involvement and team work, process design, competitive benchmarking, team based problem solving, constant measurement of results and closer suppliers’ relationship (Ross, 1993). In this research through an extensive
literature survey, the researcher has identified some of the best practices of TQM relevant in the context of hospitals and is explained in the following paragraphs.

**Top Management Leadership (TML)**

Efficient and effective Top Management Leadership (TML) is the first and the foremost TQM practice. Speaking in terms of the hospitals in general, there are two kinds of leadership namely, the Private and the Public sector leadership. In both these sectors good leadership is vital because the success of the hospital is based on the strategic moves the leaders make. The top management includes the Governing Body of the hospital, the Chief executives (director/administrator/superintendents) and senior managers of various sections, and the supervisory managers.

First of all, a systems view is necessary in TQM implementation, according to which the entire organization is considered to be constituted by people, processes and the technology. The role of the leadership is to effectively coordinate, monitor, direct and control the interaction between these three components of the system so as to meet the corporate objectives. The people involved are administrators, medical staff, nursing staff, and all the support staff. The processes are clinical, non-clinical and the administrative processes. The technology includes office automation, medical, transportation, cooling, storage, and information management. The top management has the responsibility to recruit people with the right knowledge, skills, abilities and attitudes and train them and keep them in a highly motivated state that they would contribute to the best of their abilities for the growth of the organization with a quality conscious behaviour. So, the very fundamental role of creating quality consciousness among the employees is the responsibility of the top management and when the top
management support is up to the required level it is sure to act as an enabler to the gaining of the CMA and enhance the BNP (Heavey et al., 2014).

**Customer Management (CMT)**

Customers to the hospital are the patients and their satisfaction is vital for the success of the hospital, and hence customer focus is one of the important dimensions of TQM which need to be given due consideration during its implementation. The best way to strengthen the customer focus is through customer participation. Customer participation will enable the customers to feel like a part of the service process and they can provide inputs on how to improve the service in clinical and non-clinical sections of the hospital. As there is a set of well-defined processes are established in the hospitals what is required is to check if the processes are followed by the service providers without deviations from the standards and customers (patients) are the most knowledgeable respondents who can provide inputs about the deviations if any. So, a well-defined customer management practice as a part of TQM implementation will contribute to the CMA and the BNP (Deb, 2014; Harrington et al., 2012).

**Supplier Quality Management (SQM)**

The TQM practices also include supplier quality management, as it decides the quality of the product or service and unless it is managed efficiently through proper inspection, control, and feedback measures it would adversely affect the quality of the services rendered. In today’s highly competitive business environment extended network of suppliers from both domestic and foreign markets is unavoidable. But, the success of the service or product delivery to the customers will be dependent to a great extent on the efficiency with which the suppliers are monitored for delivering quality products at the right time. This requires a very well managed supplier quality management
system which is a TQM practice. It has been proved that well-managed supply chains can promote innovations and make the organization gain CMA and enhance BNP (Ketchen & Hult, 2007; Martinsuo & Sariola, 2015).

**Continuous Improvement (CNI)**

Continuous improvement of the entire processes involved is yet another TQM practice which has produced tremendous success in the manufacturing sector (Fryer, Antony & Douglas, 2007) and now it is practiced in the service sectors too. Any process in a service sector such as hospital needs to be observed closely and the improvements in terms of tangibles, reliability, responsiveness, assurance and empathy can be continuously recommended and implemented. When the process efficiency improves the customer satisfaction also improves and the cost may also come down which leads to the improvements in CMA and BNP.

**People Management (PMT)**

People management is an important TQM practice and no system can run efficiently unless the people are trained well to run the processes and follow the standard practices which satisfy the stated and implied needs of the customers (Dibia et al., 2014; Harrington et al., 2012). Well-qualified and experienced clinical and non-clinical employees have to be recruited, placed, trained, and motivated so that they may offer dedicated and committed service to the hospital. Training programmes on quality initiatives, competence building, skill enhancement, change management, innovation and creativity, usage of modern tools and technologies, customer service, professional communication skills etc., may have to be imparted as and when required and a systematic process of training, need identification and execution may pave the way for the success in building highly competent teams which work towards the organizational objectives and may contribute
to the gaining of the CMA and enhancement of BNP (Dayton, 2003; Karia & Asaari, 2006; Rahman, 2001).

**Process Management (PRM)**

Process management is also an integral part of the TQM practices which deals with the management of the processes with utmost accuracy and with the consumption of minimum time, money, and all forms of physical resources (Kabaale & Kituyi, 2015; Sharma & Kodali, 2008). There are two important issues in connection with the process management viz., cost reduction and value addition. The process of service providing should continuously add value to the customer service and should be successful in producing satisfied customers which would lead to gaining of CMA and improving BNP of the concerned healthcare entity.

**Quality Information Management (QIM)**

Quality information management is a component of TQM practice, and the role of which is to gather structured quality data to evaluate supervisors and managers and making quality data available in all the places to the retrieval of the concerned (Laosirihongthong, Teh & Adebanjo 2013; Ooi et al.,2011). Quality data will be available in various forms at different stages of patient service in a hospital and if there is a mechanism to assimilate, store, validate, and distribute to the concerned employees who need the data for a specific problem solving or strategic planning, then the hospitals can, not only enhance their quality standards but also minimize the time to effect changes in the system. This can lead to the gaining of the CMA and the enhancement of BNP.

**Organizational Learning (ORL)**

Organizational learning is relatively a newer concept in TQM but has become popular in manufacturing industries and now invaded into the
service industries too. It is making the organization learn from self-experience and self-reflection and thus promoting the individual and group learning (Guinot et al., 2015; Pokharel & Choi, 2015). When organizational learning takes place, the entire organization will transform itself into a learning entity where the knowledge base of the organization keeps continuously growing and the organization will be ahead of its counterparts in service providing (Lam et al., 2008; Love & Heng, 2000). This would make the organization develop a CMA and enhance their BNP.

### 3.6.2 Competitive Advantage (CMA)

TQM implementation should ideally provide competitive advantage to the hospital. The literature is supportive to this point because of the simple reason that most of the researchers have found that the TQM practices are so designed to fine tune the processes in the organization through continuous improvement (Harrington et al., 2012) with a customer focus (Deb 2014; Saarijärvi et al., 2013) and promote innovation with specific focus on cost reduction and adding to varieties of products and services which should essentially promote the gaining of the CMA. It is evident through the literature review that there are two models of competitive advantage which complement each other and basically they are based on economic theory (Porter, 1985). While the first model is market-based and its emphasis is on cost leadership and product differentiation and according to this model the business environment by its natural selection do not prefer firms which are inefficient. So it is clear that this model is based on the factors which are external to the organization such as opportunities, threats and the competition. The conceptual model in this research is focusing on this model to define the CMA in business. The second model on the contrary is focused on internal factors which are mainly the resources of the organization. According to this model an organization will gain advantage in market
through its superior performance through its internal resources. This is considered separately as a separate construct in this research which is discussed in the next section.

3.6.3 Business Performance (BNP)

The TQM practices are considered to lead to a superior business performance as they are customer focused and many researchers have found that it is systems thinking of TQM which minimizes the human error and improves the product or service quality which leads to better BNP (Chih & Chih, 2014; Minna, 2014; Lai, Aziz & Chan, 2014). Sustainable BNP of the hospitals is achievable only when the hospitals have efficient operational performance (OPP), financial performance (FNP), and non-financial performance (NFP). As TQM practices are focused on the processes of the hospitals, if it is successfully implemented, then all the operations in the hospitals must be efficient and must be cost effective and consume minimum resources for the execution, thus contributing to the business performance. Many researchers have investigated BNP and made attempts to find out its antecedents but investigations on the relationship between BNP and the causal factors such as TQM are sparse. However, a group of researchers including McCormack and Johnson (2001) and Skrinjar, Bosilj and Indihar (2008) confirmed that process orientation has a positive influence on BNP. So, this research makes an earnest attempt to find causation between TQM and BNP as TQM is purely process oriented approach to enhance quality.

3.6.4 The Link between TQM and CMA

The recognition that TQM leads to CMA is a worldwide phenomenon particularly in the west and the concept has been accepted to the extent that manufacturing industry cannot survive without the use of TQM principles (Prajogo & Sohal, 2003). However, this research is in the context of a
hospital as a service organization. In generic terms of product or service industry, the link between the TQM and gaining of the CMA has been theoretically established by several researchers (Tobin, 1990; Reich, 1994; Seawright & Young, 1996; Lemak, Reed & Satish 1997; Samson & Terziovski, 1999; Reed, Lemak & Mero, 2000; Sigalas & Economou, 2013; Nadarajah, Latifah & Kadir, 2014). Except for one or two of these studies which have provided empirical evidence, rest is mainly theoretical. Any causation that has to be approved and added to the body of knowledge should pass through intuitive postulation, theoretical grounding, and empirical evidence. If organizations have to confidently invest in TQM for its ability to contribute to the gaining of CMA there must be adequate empirical evidence for the causation between the two and this research precisely attempts to achieve this.

Two levels of linkage can be established between the TQM implementation and the gaining of the CMA as evidenced through the literature review. The first is at the macro level and the second at the micro level. While the macro level of linkage refers to the linking of the TQM as a construct to CMA as another construct, the micro level linkage would be to seek causation between the individual dimensions of these two constructs. In this research macro level of linkages are focused, as TQM implementation in hospitals is relatively in a nascent stage. Once the processes and practices of TQM are well-established and tested over a period of time as in manufacturing industries micro level analysis can be undertaken to refine the model.

The well-established management concepts such as organizational behaviour, organizational change, human resource management, and leadership play a considerable role in the TQM for the simple reason that it is a concept that can succeed only through the collective effort of the employees in the organization. At the second level of operation specific
concepts such as systems theory, contingency theory, organizational culture, and strategic management they all become part of the successful TQM implementation. Researchers have proved that all these have a role to play in business performance and the gaining of the competitive advantage (Cardy & Dobbins 1996; Shea & Howell, 1998; Hinterhuber, 2013). Powell (1995) through his extensive research has concluded that, the empirical studies carried out so far have proven that TQM can produce ‘competitive advantage’. Almost all the quality gurus including Crosby, Deming, Feigenbaum, Ishikawa, and Juran have expressed that the very purpose of TQM implementation is to reduce cost, promote innovative practices, and improve customer satisfaction thus leading to superior cost structure, producing product differentiation and enhancing the organizational performance thus leading to the gaining of the competitive advantage (Reed et al., 2000). The TQM has the ability of generating a market advantage, enhancing product design efficiency, boosting product reliability, and increasing process efficiency, which can surely contribute to the gaining of the competitive advantage (Reed, Lemak & Montgomery, 1996).

In research literature there is a stream of argument, which claims that the firms with a customer orientation operating in environments with high levels of uncertainty should focus on creating a market advantage and on product design efficiency to improve revenues and reduce costs. The firms with an operations orientation in an environment with low uncertainty, a concentration on product reliability and process efficiency will produce improved revenues and reduced costs. Thus a market advantage arises from being market-driven (Day, 1990), which provides the potential for product differentiation through better identification of the needs of the customers and the ability to anticipate competitors' product offerings and thus gaining the CMA in the market.
In firms such as hospitals that can offer service/products with a higher reliability than those offered by competitors are, in effect, differentiating their service/product offerings to customers and the improved service/product reduces costs by eliminating the processes in the service/production line, which are non-value adding. This will emerge through continuous improvements in the processes coupled with innovation and leads not only to the enhancement of process efficiency, but also brings varieties in the service and products and at the same time reduces costs, which necessarily brings the CMA to the organization.

Another stream of research links the TQM to CMA though two different constructs. For instance Reed et al., (2000) has conceptualized the TQM into two distinct components as tacitness and interaction. The tacitness includes four dimensions: leadership and commitment, training and education, team building, and culture which remains hidden in the organization and cannot be easily codified in the form of explicit knowledge. On the contrast, interaction between these four dimensions can be put into an explicit form and can be recorded for the future use. While the tacitness in the four dimensions contributes to the gaining of the CMA, which go unnoticed, the contribution of the interactions between the dimensions can be clearly identified.

Yanney (2014) conducted a research in a manufacturing industry in Ghana and found that the transformational leadership style of top management did have an influence on the cost leadership thus leading to the gaining of the CMA. Ghobadian and Gallear (2001) have found that continuous improvement practices in the TQM have the ability to reduce cost and contribute to the gaining of CMA. Sousa and Voss (2002) have found that TQM is an enabler of customer satisfaction and thus it contributes to the CMA. There has been an extensive research on the resource based view
according to which the organization is considered to be a bundle of resources and if these are managed efficiently by the principles of process management which is a component of TQM, it could lead to the gaining of the CMA (Torbjørn & Aspelund, 2013; Hinterhuber, 2013). The important argument based on the resource based view is that a firm possesses valuable and rare resources and if these resources are non-imitable and non-substitutable then it can provide a CMA (Barney, 2011). The process management in TQM is so designed that it has the ability to identify these rare and valuable resources through continuous improvements and the organization can develop the non-imitable as well as non-substitutable resources which can lead to the gaining of the CMA.

The principle of customer focus used in TQM makes the organisation to consistently search for new customer needs and expectations, and therefore, leads organizations to generate product differentiation in the market thus making it gain a CMA (Juran, 1988).

In today’s highly competitive world the role of supply chain management cannot be undermined. The supplier quality management is an important component of TQM and studies have revealed that effective management of suppliers can make the product or service delivery timely as well as of high quality which can lead to customer satisfaction and contribute to the gaining of the CMA (Guido & Micheli, 2008; Johnsen, 2011; Martinsuo & Sariola, 2015).

Continuous improvement which is the fundamental philosophy of TQM is nothing but to strive in order to improve the quality of service at all levels in the form of small improvements on a continuous basis. This can lead to several outcomes such as continuously meet the customer expectations on the service and product delivery, increased operational
efficiency and productivity, better documentation and elimination of redundant processes, better quality awareness at all levels, better communication between internal and external customers, faster and effective decision making, increased reliability of processes, etc. (Rampersad, 2001; Fryer, Antony & Douglas, 2007; Khanna et al., 2011; Harrington et al., 2012). All these outcomes of TQM have direct positive impact on customer satisfaction, cost reduction, and product/service differentiation and thus the gaining of the CMA.

TQM is also indulged in people management which involves the managing of 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. A set of dedicated employees who are committed to the corporate objectives are the assets to the organization who would develop the abilities to constantly innovate and gain the CMA in the market place (Rahman, 2001; Dayton, 2003; Karia & Asaari, 2006; Harrington et al., 2012). Further, TQM is involved with process management which deals with the applying of the principles of management so that the processes in the organization are under control through clear instructions, constant monitoring, inspection, and standardization. When the processes are managed well, it can lead to better performance at lower cost leading to cost advantage to the business as well as quality enhancement of the product or service which contributes to the gaining of the CMA (Brah & Lim, 2006; Sharma & Kodali, 2008; Khanna et al., 2011).

Efficient management of the data is the key to survival in business organizations which are driven through well informed and demanding customers. The TQM has quality information management as a specific dimension which is dedicated to the structured data gathering to ensure
reliability, collecting data from the source, using quality data to evaluate supervisors and managers, making quality data available in all the places to the retrieval of the concerned. Thus, quality data which is authentic and reliable is made available to all those who need it in managing the business and it can provide a CMA in business to the organization (Khanna et al., 2011; Lam et al., 2012; Ooi et al., 2011; Laosirihongthong et al., 2013).

The ultimate philosophy of TQM is to make the organization a learning organization, which refers to the making of the organization to learn from the self-experience and self-reflection and thus promoting the individual and group learning. This principle has been very successfully practiced in several top notch organizations and it has led to creativity and innovation in the organization which can provide the CMA in business (Lam et al., 2008; Guinot et al., 2015).

Thus, all the above literature support provides ample evidence for the linkage of TQM to CMA. Even though the references are based on mainly the manufacturing industries, as TQM is being successfully practiced in service organizations it can be expected to produce similar results. What is lacking is the empirical evidence, and the providing of which is the main aim of this research. Based on the literature discussed in the previous paragraphs, the following two main and 16 sub-hypotheses are postulated.

**Main Hypothesis:**

**H\textsubscript{A}:** There is a significant influence of TQM practices on product differentiation.

**H\textsubscript{A}:** There is no significant influence of TQM practices on product differentiation.
**Sub-Hypotheses:**

H$_{1a}$: There is a significant influence of top management leadership on product differentiation.

H$_{1o}$: There is no significant influence of top management leadership on product differentiation.

H$_{2a}$: There is a significant influence of customer management on product differentiation.

H$_{2o}$: There is no significant influence of customer management on product differentiation.

H$_{3a}$: There is a significant influence of supplier quality management on product differentiation.

H$_{3o}$: There is no significant influence of supplier quality management on product differentiation.

H$_{4a}$: There is a significant influence of continuous improvement on product differentiation.

H$_{4o}$: There is no significant influence of continuous improvement on product differentiation.

H$_{5a}$: There is a significant influence of people management on product differentiation.

H$_{5o}$: There is no significant influence of people management on product differentiation.

H$_{6a}$: There is a significant influence of process management on product differentiation.

H$_{6o}$: There is no significant influence of process management on product differentiation.
H7a: There is a significant influence of quality information management on product differentiation.

H7o: There is no significant influence of quality information management on product differentiation.

H8a: There is a significant influence of organizational learning on product differentiation.

H8o: There is no significant influence of organizational learning on product differentiation.

**Main Hypothesis:**

H9a: There is a significant influence of TQM practices on cost leadership.

H9o: There is no significant influence of TQM practices on cost leadership.

**Sub-Hypotheses:**

H9a: There is a significant influence of top management leadership on cost leadership.

H9o: There is no significant influence of top management leadership on cost leadership.

H10a: There is a significant influence of customer management on cost leadership.

H10o: There is no significant influence of customer management on cost leadership.

H11a: There is a significant influence of supplier quality management on cost leadership.
H_{110}: There is no significant influence of supplier quality management on cost leadership.

H_{12a}: There is a significant influence of continuous improvement on cost leadership.

H_{120}: There is no significant influence of continuous improvement on cost leadership.

H_{13a}: There is a significant influence of people management on cost leadership.

H_{130}: There is no significant influence of people management on cost leadership.

H_{14a}: There is a significant influence of process management on cost leadership.

H_{140}: There is no significant influence of process management on cost leadership.

H_{15a}: There is a significant influence of quality information management on cost leadership.

H_{150}: There is no significant influence of quality information management on cost leadership.

H_{16a}: There is a significant influence of organizational learning on cost leadership.

H_{160}: There is no significant influence of organizational learning on cost leadership.

3.6.5 The Link between TQM and BNP

Many of the research literatures discuss the gaining of the CMA and the enhancement of business performance (BNP) side by side as they are
integral part of a business. In fact BNP is considered as a part of the gaining of the CMA by some of the researchers. However, in the context of this research BNP is dealt separately and the three components of BNP: operational performance, financial performance, and non-financial performance have been dealt separately.

Ghobadian and Gallear (2001) have found that process and people orientation of TQM are regarded as critical in order to ensure proper planning and successful implementation of TQM that results in higher levels of organisational performance. Nair (2006) performed a meta-analysis on adopting the TQM practices in several industries and established a causal linkage between TQM and BNP.

Top management leadership as a TQM principle has the responsibility of providing infrastructure, moral support, and constant encouragement to the employees in their quality endeavours and when these things are properly executed it will lead to high quality performance on the part of the employees (Beaumont, Schroder & Sohal, 2002; Demirbag, Tatoglu, Tekinkus & Zaim 2006; Sila, 2007; Minna, 2014). The customer management according to TQM should continuously collect feedback from the customers, assess their requirements, and address their complaints on timely basis and researchers have found that this can lead to better financial performance (Hussain, 2004; Demirbag et al., 2006; Sila, 2007; Jung & Hong, 2008; Salaheldin, 2009; Chih & Chih, 2014).

The supplier quality management undertaken as a part of the requirement of TQM involves taking feedback from the suppliers throughout the supply chain to make sure that they deliver the right goods in right quantity with the right quality and this would lead not only to better operational management (Newbert, 2014) but also, cut costs and improve
financial performance (Jung & Hong, 2008; Salaheldin, 2009; Chih & Chih, 2014). The continuous improvement undertaken in TQM attempts to improve the quality of service at all levels in the form of small improvements on a continuous basis and several researchers have opined that it can lead to enhanced operational performance (Beaumont et al., 2002; Demirbag et al. 2006; Sila, 2007). People management as practiced in TQM deals with well-defined processes such as appraisal, training need analysis etc., so that the employees may contribute to the growth of the organization and there will be ample scope for skills and knowledge enhancement of the employees and attitude building which will improve the overall productivity of the employees and this can improve the operational performance (Jacobs & Kleiner, 1995; Beaumont et al., 2002; Demirbag et al. 2006), financial performance (Hussain, 2004; Demirbag et al., 2006; Sila, 2007; Jung & Hong, 2008; Salaheldin, 2009) as well as non-financial performance (Hussain, 2004; Zuriekat, Salameh & Alrawashdeh, 2012; Wong, 2014) of the organization.

The TQM also has process management as an important component and it involves running the processes through clear instructions, constant monitoring, inspection, and standardization which would improve the operational performance of the business (Sila, 2007; Minna, 2014; Newbert, 2014). The quality information management practiced in TQM makes the quality data available to all the concerned for the usage and it has the ability to enhance the financial performance of the business by offering quality service to its customers (Sila, 2007; Jung & Hong, 2008; Salaheldin, 2009; Chih & Chih, 2014; Lai et al., 2014). The TQM also promotes organizational learning which brings the best of the available knowledge to the organization and this leads to the improvements in operational performance (Minna,
2014), financial performance (Chih & Chih, 2014; Lai et al., 2014) and non-financial performance (Khan et al., 2011; Zuriekat et al., 2012).

Considering the aforementioned researches it was evident that the various dimensions of TQM had proved theoretical linkages with the operational, financial, and non-financial performance of the business. Thus, the following three main hypotheses and 24 sub-hypotheses are postulated.

**Main hypothesis:**

\( H_{Ca} \): There is a significant influence of TQM practices on operational performance.

\( H_{Co} \): There is no significant influence of TQM practices on operational performance.

**Sub-Hypotheses:**

\( H_{17a} \): There is a significant influence of top management leadership on operational performance.

\( H_{17o} \): There is no significant influence of top management leadership on operational performance.

\( H_{18a} \): There is a significant influence of customer management on operational performance.

\( H_{18o} \): There is no significant influence of customer management on operational performance.

\( H_{19a} \): There is a significant influence of supplier quality management on operational performance.

\( H_{19o} \): There is no significant influence of supplier quality management on operational performance.
$H_{20a}$: There is a significant influence of continuous improvement on operational performance.

$H_{20o}$: There is no significant influence of continuous improvement on operational performance.

$H_{21a}$: There is a significant influence of people management on operational performance.

$H_{21o}$: There is no significant influence of people management on operational performance.

$H_{22a}$: There is a significant influence of process management on operational performance.

$H_{22o}$: There is no significant influence of process management on operational performance.

$H_{23a}$: There is a significant influence of quality information management on operational performance.

$H_{23o}$: There is no significant influence of quality information management on operational performance.

$H_{24a}$: There is a significant influence of organizational learning on operational performance.

$H_{24o}$: There is no significant influence of organizational learning on operational performance.

**Main Hypothesis:**

$H_{Da}$: There is a significant influence of TQM practices on financial performance.

$H_{Do}$: There is no significant influence of TQM practices on financial performance.
Sub-Hypotheses:

$H_{25a}$: There is a significant influence of top management leadership on financial performance.

$H_{25o}$: There is no significant influence of top management leadership on financial performance.

$H_{26a}$: There is a significant influence of customer management on financial performance.

$H_{26o}$: There is no significant influence of customer management on financial performance.

$H_{27a}$: There is a significant influence of supplier quality management on financial performance.

$H_{27o}$: There is no significant influence of supplier quality management on financial performance.

$H_{28a}$: There is a significant influence of continuous improvement on financial performance.

$H_{28o}$: There is no significant influence of continuous improvement on financial performance.

$H_{29a}$: There is a significant influence of people management on financial performance.

$H_{29o}$: There is no significant influence of people management on financial performance.

$H_{30a}$: There is a significant influence of process management on financial performance.

$H_{30o}$: There is no significant influence of process management on financial performance.
There is a significant influence of quality information management on financial performance.

There is no significant influence of quality information management on financial performance.

There is a significant influence of organizational learning on financial performance.

There is no significant influence of organizational learning on financial performance.

Main Hypothesis:

There is a significant influence of TQM practices on non-financial performance.

There is no significant influence of TQM practices on non-financial performance.

Sub-Hypotheses:

There is a significant influence of top management leadership on non-financial performance.

There is no significant influence of top management leadership on non-financial performance.

There is a significant influence of customer management on non-financial performance.

There is no significant influence of customer management on non-financial performance.

There is a significant influence of supplier quality management on non-financial performance.

There is no significant influence of supplier quality management on non-financial performance.
H36a: There is a significant influence of continuous improvement on non-financial performance.

H36b: There is no significant influence of continuous improvement on non-financial performance.

H37a: There is a significant influence of people management on non-financial performance.

H37b: There is no significant influence of people management on non-financial performance.

H38a: There is a significant influence of process management on non-financial performance.

H38b: There is no significant influence of process management on non-financial performance.

H39a: There is a significant influence of quality information management on non-financial performance.

H39b: There is no significant influence of quality information management on non-financial performance.

H40a: There is a significant influence of organizational learning on non-financial performance.

H40b: There is no significant influence of organizational learning on non-financial performance.

3.7 The Hypothetical Research Model

The objective of this research is to study and explore the influence of the TQM implementation on the gaining of the CMA and on BNP. The various hypotheses postulated in the previous sections may be conceptualized as shown in figure 3.2.
Figure 3.2: Hypothetical Research Model

Legend:
1. Top management leadership (TML)
2. Customer management (CMT)
3. Supplier quality management (SQM)
4. Continuous improvement (CNI)
5. People Management (PMT)
6. Process management (PRM)
7. Quality information management (QIM)
8. Organizational learning (ORL)

Competitive Advantage (CMA) (Outcome 1)
Product Differentiation (PRD)
Cost Leadership (CSL)
TQM Practices (Enabler)
TML
CMT
SQM
CNI
PMT
PRM
QIM
ORL
Business Performance (BNP) (Outcome 2)
Operational performance (OPP)
Financial performance (FNP)
Non-Financial performance (NFP)

H1 to H8
H9 to H16
H17 to H24
H25 to H32
H33 to H40
3.8 Summary

The theoretical and the conceptual framework connected with TQM has been discussed in this chapter. The chapter highlighted the significance of quality management for service industries in general and for healthcare industry in particular. The TQM as a construct has been very well explained in this chapter with its origin, definition and benefits. The chapter has also systematically presented the TQM initiatives in Indian healthcare. The importance of leadership in TQM has also explained. The conceptual model of this research has been explained with its individual components i.e., TQM practices, CMA and BNP. This chapter has established the linkage of the eight dimensions of the TQM implementation screened through the research literature review with the dimensions of competitive advantage the hospital can gain in the market and the enhancement in the business performance. This linkage development is one of the objectives of this research. Several views and opinions of the researchers have enabled the building of the relationship that is portrayed in the hypothetical research model. While some linkages have empirical evidence, some have a strong grounding in theory. This chapter provides the foundation to the development of the structural model. The subsequent chapters would deal with the identification of the appropriate research methodologies and the testing of the relationships in the form of the hypotheses developed in this chapter.