CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

Human life has been a bundle of changes. Change is considered to be the only constant phenomenon. Change has invariably improved and bettered societies. One such area that ignited a reaction of changes in the human life is the world of business. Business today cannot afford to stand still because of the changes in human requirements. Managing change effectively is the perquisite of a business for securing competitive advantages in the global market place. In the ancient times, the population was manageable, and people could use the available resources for the family needs to sustain them. In the modern world and with the changes in technology, people are enjoying high living standards and demanding for more resources. The development in technology has not only increased the world population but has also increased the depletion of resources. This, therefore, necessitates improvement in production and improved services so that they can be able to meet the increased requirements of the population. These trends manifest in increasing capricious and diverse consumer preferences, more demanding consumers, an increasing interest for things such as status, reputation, brand names, logos, product design, user friendliness, and after sales service. (Cobbenhagen, J. et. al., 1995)\(^1\). Management has mainly to do with a strongly changing requirement for which the emphasis has shifted to the skill, the quality of products or services. (R.P.uit Beijerse, 2000)\(^2\).

In today’s global competition quality has become one of the important factors for achieving competitive advantage. Quality has been evident in human activities for as long as we can remember, as quality has been with us since the dawn of civilization. Customers all over the world have become so demanding and expecting, hence for an organization, quality is no longer a competitive advantage, but a sheer necessity to
survive in the marketplace. Therefore, quality has to be designed and built into products and not just “inspected” into products. A good quality product or service enables an organization to add and retain customers. Poor quality leads to discontented customers. So the costs of poor quality are not just those of immediate waste or rectification but also the loss of future sales. Excellence is the norm required by a company to survive and grow in this competitive arena (Nawar Khan 1999). Ho (1995) states that the criteria for success in this global market in order to expand business and set realistic, competitive long term objective, excellence is an imperative. Munro-Faure L. and Munro-Faure M. (1993), says that to succeed in today’s competitive market, organizations in general and employees in particular must understand customer’s requirements and the employees must be committed to fulfill the customer requirements and this is true even today. With growing global competition and technological innovation constant pressure is applied on the management and this has forced organization to invest substantial resources in adopting and implementing Total Quality Management (TQM). TQM is becoming increasingly important to the leadership and management of an organization to survive and prosper or else they will be endangered. Both the survival and growth of the business are being claimed to be dependent upon the adoption of an ever competitive business philosophy of excellence by adopting Total Quality Management. In this changed context, TQM practices take the first priority in business management. TQM is in practice in all sectors of the business. The printing sector is not an exception to this. Competition is extremely fierce and printers have to find ways to distinguish their products and services from those of their competitors. It is extremely difficult, if not impossible for printing units to survive in this fierce competition without implementing TQM (Apfelberg. et.al., 1999). Owing to liberalization and globalization, the printing industry is progressing at a very fast speed.
by adopting modern technology and by employing professionals (Colin Thompson 2013). The theoretical and empirical studies (discussed in the review chapter of this work) show that little work has been done with respect to TQM in printing industry, and countable in Indian printing industry. This is more so in Karnataka in general and North Karnataka in particular.

With these prefatory remarks, this chapter entitled ‘Introduction’ is structured in such a way has to strike the key note of the entire thesis. It introduces matters such as, what is proposed to be researched, why it is proposed to be researched, and how it is proposed to be researched. The intent and content, the problematic and the importance of the present inquiry get explicitly stated here. With view to ensuring these things, this chapter including this introductory section has eight sections. A brief note on TQM is given in the second section. In the third section, the subject of present research inquiry is problematized, in keeping with the rich tradition of social science research. In this regard, a few basic questions are raised. The fourth section, based on the problematics, presents the principal objectives of the research. The objectives are worded in such a way as to provide directions to the thesis. In fact, the objectives are based on and are derived from problematics. Based on these objectives, the hypotheses proposed to be tested and subsequently got tested, are presented in the fifth section. And, based on problematics, objectives and hypotheses, the methodology adopted in this inquiry is detailed in sixth section. The seventh section identifies the nature, scope and importance of the present study. The eighth, the last section gives the intent and content of the chapter into which the thesis is divided.

1.2 BRIEF NOTE ON TQM

In the present competitive environment, survival of the organization depends on their ability to continuously improve quality as per the expectations of the customers.
Quality is critical in achieving competitiveness in domestic and global market, as quality is a prerequisite to have satisfied customers (Sun 2000). Though there are wide variety of concepts surrounding the word ‘quality’, all writers agree that quality is one of the important “critical success factors” to achieve competitiveness in organizations. Quality has expanded beyond the concept of “customer satisfaction with products and services” to the concept of “creation of worth for all stakeholders” (Karpetrovic et. al., 2002). In this context, overall business excellence is replacing the narrow objective of meeting customer’s specifications to improving the performance of the whole system (Khanna et. al., 2008).

TQM is a management paradigm built on a philosophy of never ending quality improvement. TQM has its roots back to the era of 1970’s and 80’s when the US companies were struggling for their survival in an adverse atmosphere of recession, decline in business, deregulations, increasing competition, growing trade deficit, low productivity and educated customer demanding for more quality products and services. Drucker further mentions that the giants of the American economy such as Ford Motors and Xerox have suffered from high losses in this period because of the unfavorable market conditions and increasing competition from the foreign competitors. This was the time when the true concept of TQM begins to emerge and companies started realizing the importance of quality.

TQM plays a vital role in the development of management practices (Prajogo and Sohal, 2003; Hoang et al, 2006). Berry (1991) has defined the importance of TQM philosophy in a single and very comprehensive sentence as “Because it’s a matter of survival!”, Feigenbaum (1991) comments total quality control gives a producer major and unique competitive power in modern national and international market place. Badri et. al., (1995) concludes “Quality management is a key factor in gaining
competitive advantages”, Pheng and Ke – Wei (1996)\textsuperscript{16} comment “TQM gives an organization the competitive edge”, Ho and Fung (1994)\textsuperscript{17} argue that “TQM is the theme for excellence for companies to survive and grow. Many researchers asserted TQM as an approach to improve effectiveness, flexibility and competitiveness of a business to meet customers’ requirements (Oakland, 1993\textsuperscript{18}; Das Handfield, Calantone) and (Ghoss, 2000\textsuperscript{19}; Douglas and Judge, 2001\textsuperscript{20}; Kaynak, 2003\textsuperscript{21}; Flores, 2008\textsuperscript{22}) defines as the source of sustainable competitive advantage for business organizations, (Terziovski, 2006)\textsuperscript{23}, as a source of attaining excellence, creating a right first-time attitude, acquiring efficient business solutions, delighting customers, and suppliers etc., (Mohanty and Behera, 1996\textsuperscript{24}, claver-cortes et al, 2008\textsuperscript{25}; teh et al, 2009\textsuperscript{26}) all defined TQM as a source of enhancing organizational performance through continuous improvement in organizations’ activities. In recent decades the level of awareness towards TQM has increased drastically and has gone to its peak to become a well-established field of research due to intense global competition, increasing consumer consciousness of quality, rapid technology transfer towards achieving world-class status (Arumugam et al, 2008\textsuperscript{27}; Yusuf and Aspinwali, 1999\textsuperscript{28}).

TQM at first glance is seen primarily as a change in an organization’s technology from its way of doing work. In the human services this means the way clients are processed, the way service is delivered and organizational processes such as paperwork, procurement and other procedures. But TQM is also a change in an organization’s culture, its norms, values and belief systems about how organizations function. It is also a change in an organizations political system; decision making processes and power bases. For significant change to occur, changes in these dimensions must be aligned. TQM as a technological change will not be successful unless cultural and political dimensions are attended to as well (Tichey, 1983)\textsuperscript{29}. The
success of TQM mainly depends on achieving the internal and external customer satisfaction (Oakland, 1993). Powell (1995) based on his empirical study, proposed that TQM improves organizational performance. In the current scenario, many companies have arrived at the conclusion that effective TQM implementation will improve the competitive abilities and leads to business excellence (Anderson. et.al., 1994). In large number of Indian organization, both manufacturing and service, quality has emerged as a key strategic issue due to challenges posed by globalization and liberalization. Many Indian organizations have taken the route of TQM to face these challenges; Indian printing industry is no exception for this trend (Goyal, 2010).

1.3 PROBLEMATICAS

Some theoretical and empirical inquiries have gone into the critical role of TQM practices in ensuring competitive advantage and business success of firms; they have provided evidence that there exists a direct relationship between TQM practices and organizational performance. John D Miller (1995) in his case study concludes that implementing TQM practices the companies increase their profits by reducing their manufacturing costs.

But nothing of this sort has been happening in India and especially in printing sector. Not only that, unlike in the west, even the leading organizations in India do not have management research interest (Pareek and Rao, 1992). S.B. Mallur (2010) who has attempted to survey TQM practices in North Karnataka in manufacturing SMEs observes that TQM practices in North Karnataka are far below South Asian countries. Implementation of TQM in India is still in its infant stage (Pareek, U. and Rao.T.V. 1992).

Traditionally, the printing industry has not taken any continuous process improvement seriously. As printing has been a highly skilled craft, it was generally
assumed that the Printing process would remain fairly constant. The Indian Printing Industry today comprises more than 2,50,000 big, small and medium printers with a total turnover of more than US $ 12 billion. (Indian printing industry profile 2010)\textsuperscript{38}.

In America and German countries, many of the research works are carried on in implementing TQM. There are a number of studies on adoption of TQM and general description of the different aspects of quality practices. But nothing of this sort has been happening in India and especially in printing units; no serious research inquiry has been to verify the alleged positive association between TQM and business performance, even leading printing units in India do not have management research. And as far as North Karnataka is concerned, no specific comprehensive study has been made to determine the relationship between TQM practices and firm performance in respect to printing units of North Karnataka. In order to fill the gap, the present study has been undertaken.

There is a tradition in social science research and particularly in applied and action research, to split the research topic into some questions and problematize it. Problematization is absolutely necessary in action research, which, inter alia aims at providing solutions to problems – explicit as well as implicit – that go with the research topic. Problematics acts as the basis for the subsequent activities such as setting the objectives for the study, and in deciding the appropriate methodology. Chandra Poojary (2005)\textsuperscript{39} observes that problematics, objectives and methodology are inter-linked in a chain. In fact the objectives of the study are based on and are derived from the problematics, and the methodology to be adopted is based on and is derived from the objectives set for the study.

In this background, an attempt is made in this section to problematize the research topic “TQM practices in printing press: A Study of some select printing units in North Karnataka”, by raising some relevant questions on the diverse dimensions of
The questions are raised in the dismal background of the virtual absence of the theoretical and empirical research on TQM practices in printing units in general, and that of printing units of North Karnataka considered in the present inquiry in particular. Awareness of various practices of TQM and their inter-relationships, on one hand, and their impact on business performance on the other is very much important for using TQM practices to augment business performance. It is very much necessary for the printing units to know that firm-performance is the dependent variable, and TQM practices are independent variables, so that they can influence the former by consciously managing the latter. If the unit fails to understand this, it is indeed a problem and gives rise to certain research questions:

- Are the respondents of printing units aware of TQM?
- Have the responded printing units implemented TQM?
- Are the respondents of printing units aware of barriers to TQM implementation?
- Are the respondents of printing units aware of major critical success factors of TQM?
- Are the respondents of printing units aware of impact of TQM practices on business performance?
- Are the respondents of printing units aware of influence of TQM practices on customer satisfaction?

The researcher has to address the aforesaid questions in the chapters that follow.

1.4 OBJECTIVES OF THE STUDY

Giving due consideration to the issues raised under “Problematics” (discussed in section-1.3), the researcher has set the following objectives for the study on hand.
1. With an intention to prove the necessity of the present inquiry, both intent-wise and content-wise, it is proposed to make comprehensive survey of the theoretical and empirical works related to the varied facets of TQM.

2. It is proposed to know the extent of awareness of TQM in select printing units.

3. It is proposed to know the level of TQM implementation in select printing units.

4. To identify the major barriers to successful implementation of TQM in select printing units and the difference in barriers between the respondents of select single-colour and multi-colour printing units.

5. Given the Paucity of empirical studies on TQM in Indian printing units in general, and the virtual absence of such inquiries in North Karnataka, in particular, it is intended to identify the major critical success factors of TQM in the select printing units.

6. To determine the impact of TQM practices on the business performance of select printing units in terms of turnover.

7. To evaluate the impact of TQM practices on customer satisfaction.

8. To observe the printing process and design a printing job flow chart, design cause and effect diagram to trace the problems, design cause and effect diagram to find the solutions for the problems.

1.5 HYPOTHESES

In the light of the problematic and objectives stated in the preceding section, the present study attempts to test the following hypotheses, which are directly related to TQM practices & its impact on printing press performance.

The hypotheses are intended to be tested based mainly on the data and information gathered during the research.
1. There is no significant difference in the extent of awareness of TQM between Single color and Multi-color printing units.

2. There is no significant difference in the extent of implementation of TQM between Single color and Multi-color printing units.

3. There is no significant difference in the barriers to TQM implementation between Single-colour and Multi-colour printing units.

4. There is no significant difference in the extent of importance of CSFs of TQM between Single-colour and Multi-colour printing units.

5. There is no significant difference in turn over between TQM implemented and TQM not implemented printing units.

6. There is no significant difference in the extent of customer satisfaction towards quality attributes between TQM implemented and TQM not implemented printing units.

1.6 RESEARCH METHODOLOGY

As pointed out in section 1.3, there is acute paucity of research on Total Quality Management practices with respect to printing units. And no research inquiry has gone into this specific aspect in North Karnataka to explain the impact of TQM practices on the performance of printing units. With a view of achieving the objectives set for the study, the researcher has used two research approaches, namely, empirical and applied / action research. It is a kind of participatory research in which the researcher and the researched keep themselves in touch with each other as often as possible from the beginning to end, and the research outcome would be of immense use to the researched printing units in implementing TQM, and, redesigning their process and in taking remedial actions, if necessary. These factors have influenced the methodology adopted.
The study is based on the primary source and secondary source of information. The researcher attempted a relatively comprehensive survey of the theoretical and empirical works under the guidance of her research supervisor. She found that most of the works of TQM were of manufacturing and service industries in general and only a few on printing units in particular. And with a few exceptions, they were done on enterprises located abroad. There was no direct study on the TQM practices in printing units in North Karnataka (these aspects are discussed in detail in chapter two). There is paucity of similar studies in India (Goyal et.al., 2010), in general and North Karnataka in particular.

With this background, the researcher got in touch with the District Industries Centre of North Karnataka and gathered information about the printing units of thirteen districts of North Karnataka. The information so gathered comprised firm-wise matters pertaining to the location of the firm, year of establishment, total investment and employment.

In order to lend authenticity to the work, the data are gathered from both secondary and primary sources. Secondary sources include: the periodical and special publications of the Directorate of Economics and Statistics, and the Directorate of Commerce and Industries, Government of Karnataka; the District statistical office; District Industries Centre, the perspective plan of the thirteen districts and Census Reports. Apart from these sources, information and data are collected from Karnataka Human Development Reports (KHDRs) 2005; and the recommendations for Redressal of Regional Imbalances popularly known as Dr. D M Nanjundappa Committee recommendations; and some research papers and doctoral theses.

The data are also gathered from the print media – periodicalals, journals and dailies like The Hindu and Economic Times. Above all, the firm-specific secondary data
are gathered personally from other office records of all the select printing units. The sources for theoretical and empirical studies on TQM in printing units are reviewed in chapter two and are mentioned in the chapter-wise references and in the bibliography.

The primary data are gathered from the owners of 130 select printing units. To gather information related to TQM, the non-probability sampling strategy called ‘Convenient sampling’ was adapted. A convenience sampling is available to the researcher by virtue of its accessibility (Bryman and Bell, 2003). The researcher has used interview method based on the questionnaire. The researcher has used two sets of questionnaire. The first set of questionnaire, (Annexure-1), is meant for gathering information from the press owners/quality in-charge related to TQM practices. The second set of questionnaire (Annexure-2), is meant for collecting information from the press customers related to printing quality. The researcher explained the intent and content and the importance of the research project and its usefulness to the printing units in general and to the units covered by the study in particular.

Using the first set of questionnaire (Annexure-1), the researcher has sought information from owners of the printing units related to awareness of TQM, implementation of TQM, barriers to TQM implementation, critical success factors of TQM, impact of TQM on business performance in terms of turn-over. The researcher has given instructions on filling the questionnaire. The researcher has distributed the questionnaire to 192 select units, out of which only 163 filled questionnaire were received back. Among 163 filled questionnaire, 33 of them had missing values making sample size to 130. During her visit to the select printing units she used direct observation technique to gather additional information, not covered in the questionnaire, to know the printing process and identified the areas where problems may occur discussing with the respondents of select printing units. The additional information so
gathered has subsequently been used to design printing job flow chart, cause and effect
diagram to trace the problems, cause and effect diagram to find the solutions for the
problems.

Using the second questionnaire (Annexure-2), the researcher has sought
information related to printing quality from the customers of select printing units. The
information and data so gathered consists of gender, age, education, occupation, and
perception about quality, based on sixteen quality attributes. The questionnaire is based
on five point Likert scale ranging from “least satisfied” (1) to “most satisfied” (5). All
the select printing unit customers were choosen for collecting the data. Data is collected
from 450 respondents. Among these 450 responses, eighteen of them had missing
values, making the sample size to 432.

The information and data so gathered from the owners/quality in-charge and the
customers of the select printing units are analyzed with SPSS 20 using the statistical
techniques. The statistical techniques used are: descriptive statistics, ANOVA, Factor
analysis, Bartlett’s test of Sphericity, KMO test for sampling adequacy, T-test, Chi-
square test etc.

As far as, writing methodology is concerned, the researcher has followed the
methodology used by Ravi Kishore (2011)\textsuperscript{43}, Seshadri (1991)\textsuperscript{44} and Jayanna (1990)\textsuperscript{45}.
As per this method, the presentation is structured in such a way that, if one reads in-
between-lines, the first introductory chapter and the last concluding chapter, one would
be able to know in a succinct way what lies in between that two, one has to go through
them for details. Similarly if one reads in-between-lines, the first introductory section
and the last concluding section of any chapter, one would be able to comprehend the
essence of what lies between the two.
1.7 NATURE, SCOPE, IMPORTANCE AND LIMITATIONS OF THE STUDY

The present study, as its main title suggests, is an investigation into diverse facets of the TQM practices, its impact on printing units, and on their customers. The study is confined itself to the TQM practices of the 130 select printing units located in North Karnataka.

Of course, literature review theoretically provides a macro level background, to begin with, and then based on it, an attempt is made to study the TQM practices in general and that of the select printing units in particular. And as far as the empirical review is concerned, for the purpose of problem – specific review, the works done across the countries including those done in India, and in Karnataka on TQM practices are taken into account. That way, it is both theoretical and empirical in nature. And it is an action / applied research. The review of the theoretical and empirical studies made in the second chapter incidentally indicates that not much has been done in the direction of inquiring the impact of TQM practices on printing units at the national level and perhaps, at the global level. TQM, with specific regard to printing sector, has been relatively neglected in terms of empirical research. Davor Donevski et.al., (2009)\(^46\) conclude that in printing units quality control and continuous improvements were neglected. Paige Cornelison (2013)\(^47\) observed that majority of the employees of printing companies have heard of TQM, but do not have a clear understanding of what TQM is. Motwani et al.,(1994)\(^48\) conclude that TQM in India is at nascent stage. The empirical study carried by Singh (1991)\(^49\) revealed that very few companies were adopting TQM practices in India.

During the past two decades our technological world has changed rapidly, “printing”, as we know is a part of technological world and is continually changing in
response to society’s needs. Due to change of regulatory, import of first RC (re-conditioned) machines has been increased, which requires less investment. These changes resulted in stiff competition, compression of profits. As a result, quality has become an increasingly important factor in determining the market share and profitability in printing sector.

The customers of twenty first century are more aware of quality than ever before. Differentiating a product by its quality has become one of the important factors for a business to survive in this competitive market. Though printing sector being a part of this competitive market no comprehensive studies are made on TQM practices in printing sector in India. Research enquiries to know awareness of TQM, implementation of TQM, barriers to TQM implementation, factors responsible for success of TQM, impact of TQM on business performance in printing sector have not been made neither by the management of printing units nor by the academicians in the study area. There is a paucity of research on TQM in printing units in the study area. Hence, the present study tries to fill this research gap.

Geographically, this study is confined to the thirteen districts of North Karnataka region namely, Belagavi, Bidar, Kalaburgi, Raichur, Koppal, Ballari, Yadagiri, Dharwad, Bagalkote, Gadag, Haveri, Vijayapura and Uttarakannada, where the industrial activity is more but still the districts of North Karnataka (Bidar, Kalaburgi, Raichur, Ballari, Koppal, Uttar kannada) are declared as backward and Belagavi steadily improving district compared to South Karnataka (HPC 2002). Hence the researcher herself being a native of North Karnataka made up her mind to select North Karnataka region as study area and made an attempt to make some valuable and meaningful contribution about TQM in the select printing units, which would help them to improve their performance. The empirical part of it is based on primary data collected
from 130 printing units, eleven of them are multi-colour and remaining 119 are single-colour printing units.

Thematically, the study includes TQM practices and their impact on firm’s performance. The study makes two contributions to the literature pertaining to the TQM of printing units. Firstly, this study contributes to our understanding of TQM practices in the context of printing units, an area which suffers from paucity of research, and especially in the study area. Secondly, the impact of TQM practices on firm performance is taken up for discussion; this is also an under-focused area.

The importance of the study lies in making valuable and useful contributions to the area of research academically and to the management of printing units. Academically, it adds something meaningful to the existing knowledge of TQM, especially on printing units. It claims its distinction by being the first of its kind, by being the first direct empirical research attempt as far as TQM in printing units in Karnataka, in general, and, in North Karnataka, in particular. As a part of action research, its findings—diagnostic and prescriptive would be directly useful to the select printing units. The study has also made some general and specific recommendations by analyzing and interpreting the findings.

The usage of findings and recommendations may go beyond the study area and the select printing units in it. The other printing units in the study area as well as others elsewhere could make use of these by making some modifications according to the situation.

Notwithstanding the importance that the thesis claims in terms of its contribution to TQM in printing units, it does have some limitations. But for the limitations mentioned below, the work’s significance would have been more than what it is now.
The analysis of TQM practices is made based on the information collected from respondents (owners/quality in-charge) of 130 select printing units neglecting employees involved in manufacturing process.

Limited number of barriers (only 11), were considered to assess the barriers to implementation of TQM.

Limited number of items (only 59), were considered to assess the critical success factors of TQM.

To know the impact of TQM practices on business performance only two factors were considered namely, turn-over and customer satisfaction.

To assess customer satisfaction quality attributes were selected from literature review and from the experts of the printing industry, though all the quality attributes are considered in this study, there may be a few that may have been omitted or that may become important due to new trends in printing evolve.

Having identified the need for TQM tools in printing units, the researcher made an attempt to design – printing job flow chart, cause and effect diagram to trace the problems, cause and effect diagram to find the solutions for the problems. It is only a humble attempt. As such, the researcher does not claim either finality or infallibility for tools designed by her (chapter 4)

Time and money have always been the main constraints in almost all research studies. This research inquiry is based on the primary data collected from the respondents of select printing units and customers, but the suppliers of the printing units were not included in the study.

1.8 STRUCTURE OF THE THESIS

Including this introductory chapter, the thesis consists of five chapters. A relatively comprehensive survey of literature – theoretical and empirical – pertaining to
TQM practices is undertaken in the second chapter. Most of the TQM practices and their bearing on the customer satisfaction and firm’s performance are discussed here. The third chapter entitled “Profile of the study area and the select printing units” provides the backdrop for the study. It gives a relatively comprehensive picture of the district’s resources- governance and administrative set up, natural resources, population and demography, industrial development, social sector development, economic infrastructure, human development and so on and also provides the profile of the select printing units, which includes details of- year of establishment, nature of business, investment, employment, and decision-making authority. The next, the fourth chapter “TQM practices and their impact on business performance in the select printing units” examine the awareness of TQM and implementation of TQM in select printing units, critical success factors of TQM, impact of TQM on business performance in terms of turn-over and customer satisfaction. The fifth chapter, being the last chapter, concludes the study by giving an integrated summery of all principal findings and, based on these findings, it makes some recommendations as remedial measures to the select printing units, which can be applied to printing units elsewhere with some context-specific changes and modifications. It also carries some suggestions for future research.
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