TOTAL QUALITY MANAGEMENT FOR COMPETITIVE ADVANTAGE OF SMALL AND MEDIUM ENTERPRISES

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ABSTRACT
Total Quality Management (TQM) is a holistic method that is applied despite many quality concepts, tools and techniques developed to achieve this objective. Since the introduction of TQM, it has contributed much to management practice around the world. The existing literature, the empirical studies have unveiled that the way organizations implement TQM can significantly affect the outcomes of the business. The study uses both primary and secondary data. Primary data was collected with a sample size of 70 SMEs using a structured survey instrument. Based on the analysis, the implementation of total quality management (TQM) in SMEs was contributing a prominent and significant positive impact on the Competitive Advantage. Hence, organizations have to take proper measures in implementing TQM in their organizations.

Key Words: Quality, TQM, Competitive Advantage, JUSE, Service Quality

1. INTRODUCTION TO STUDY:
Total quality management (TQM) principles and techniques are well accepted around the world. The Union of Japanese Scientists and Engineers (JUSE) has initiated the quality movement in 1949. Later, it has adopted by the whole world.

TQM is seen as system integration with various aspects of the organisation’s activities including human resources and driven by the same commitment, shared beliefs and objectives in mind. According to Zairi1, TQM is the agreed company-wide and plant-wide operating work structure, documented in effective, integrated, technical and managerial procedures for guiding the co-ordinated actions of the people, the machines and information of the company and plant in the best and most practical ways, to assure customer satisfaction and economical costs of quality.

Competitive advantage grows out of value for a firm that exceeds the firm’s cost. What buyers are willing to pay is called value. Superior value stems from offering lower prices than
competitors offer equivalent benefits for providing unique benefits that more than offset a higher price. There are two basic types of competitive advantage: cost leadership and differentiation

2. REVIEW OF EXISTING LITERATURE

The existing literature on the competitive advantage and the total quality management is has given below.

Bikshapathi, Vijayagiri (2014)\(^3\), observes, the total quality management (TQM) is the integration of all function and processes within the organisation to achieve continuous improvement of the quality of goods & services produced in the organisation. (Daft, 1991)\(^4\) Firms employing a total quality management approach can achieve all the three of Porter's competitive strategies. The focus on improving the quality of products and services to the organization's present customers (thereby increasing customer value), leads both to lower costs of production (cost leadership) that produce both greater profits and lower prices, and differentiation (the firm's products and services are seen as providing higher levels of reliability, quality, and value).

3. OBJECTIVES OF RESEARCH:

The focus of the present study is the role of TQM in SMEs.

i. To identify the critical elements of total quality management (TQM) of SMEs for accomplishing Competitive Advantage

ii. To assess the impact of total quality management on SMEs on improvement

iii. To analyse if total quality management is of Competitive Advantage in SMEs or not

4. HYPOTHESIS OF STUDY:

The study is based on the following hypothesis;

H\(_0\): TQM practices are no significant role in SMEs’ Competitive Advantage. It was tested further, under the Quality Elements of Competitive Advantage and;

H\(_1\): TQM practices have a significant role in SMEs’ Competitive Advantage. It was tested further, under the Quality Elements of Competitive Advantage.
5. METHOD OF DATA COLLECTION:

The study uses both primary and secondary data. The primary data was collected from the respondents of selected small & medium enterprises (SMEs) situated in and around Karimnagar with a survey instrument, i.e. questionnaire with multiple-choice questions based on the Likert’s scale.

The primary data was collected with a sample size of 70 SMEs for the study. A structured survey questionnaire was constructed for collecting the primary data. The respondents are selected from across the Karimnagar district in various SMEs. The survey instrument is consisting of 44 questions based on the Likert’s scale besides, questions requesting demographical data of the respondents.

6. SAMPLING OF DATA:

The simple random method of sampling is used for the study. The respondents chosen are SMEs situated in and around the Karimnagar, which includes manufacturing, engineering, granite, construction, automobile, Agro-based rice mills and other industrial units for the study. The data was verified and analysed using various statistical tools like percentiles, averages, chi-square test etc.

7. RELIABILITY OF DATA:

The Cronbach’s alpha reliability tests are conducted for the study. It is calculated for each construct and found the values between 0.734 and 0.822. The overall coefficient of alpha for 44 items of all seven constructs arrived is 0.930. It is observed that the alpha values for each construct in the questionnaire indicated the strong reliability among the measures.

8. LIMITATIONS OF THE STUDY:

The limitations of the study are identified as that the primary data was collected from selected respondents, hence, the results drawn from this are subject to flaws such as bias or responses with limited knowledge etc. The results, however, may be generalised keeping view of the above-said limitations.
9. DATA ANALYSIS & DISCUSSION:

The statistical software package SPSS was used for statistical analysis. Analysed the introduction of TQM in the SMEs to obtain the Competitive Advantage. The description of data are given below and analysed the results.

9.1. RESPONDENTS’ INDUSTRY PROFILE

The “nature of the business” of the organization has reflectionson the industrialisation in the Karimnagar district and it helps to understand the business prospects of the respondents’ SMEs.

<table>
<thead>
<tr>
<th>Nature of Business</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Trading</td>
<td>11</td>
<td>15.7</td>
<td>15.7</td>
<td>20.0</td>
</tr>
<tr>
<td>Service</td>
<td>17</td>
<td>24.3</td>
<td>24.3</td>
<td>44.3</td>
</tr>
<tr>
<td>Granite Extraction</td>
<td>21</td>
<td>30.0</td>
<td>30.0</td>
<td>74.3</td>
</tr>
<tr>
<td>Rice Milling (Agro)</td>
<td>18</td>
<td>25.7</td>
<td>25.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary Data

The surveyed SME units are classified into majorly 5 types i.e. Manufacturing, Trading, Service, Granite Extraction and Rice-milling agro-based enterprises. The above Table provides that the manufacturing industry occupies only 3 (4.3%) of the total sample. But 21(30.0%) SME units engaged in Granite extraction, is the top business of the Karimnagar District. The Agro-based industries and Rice milling are also equally popular businesses of the district which cover 18 (25.7%) respondents, Service and Trading SMEs engaged in Automobiles finance and Textiles are occupying 17 (24.3%) and 21 (30.0%) respectively. The small organisations are more in total in comparison to the others in sample respondents.

9.2. LINK BETWEEN TQM AND COMPETITIVE ADVANTAGE:

The link between TQM and the Competitive Advantage of SMEs has been tested in terms of the various organisational affects. The Factors identified leading to Competitive Advantage were Effective Product Design, Cost Consciousness, Delivery Commitment to Customers, and Flexibility in Management. The following tableis explained shows the linkage.

The constructs tested by the study which the SMEs employing for gaining competitive advantage.
### Table 2: Constructs For Competitive Advantage

<table>
<thead>
<tr>
<th>SI No</th>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Significance α Value at 1% level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Design</td>
<td>70</td>
<td>4.39</td>
<td>.532</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>Cost Consciousness</td>
<td>70</td>
<td>4.19</td>
<td>.629</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>Delivery Commitments</td>
<td>70</td>
<td>4.43</td>
<td>.526</td>
<td>.000</td>
</tr>
<tr>
<td>4</td>
<td>Flexibility in Management</td>
<td>70</td>
<td>4.14</td>
<td>.537</td>
<td>.000</td>
</tr>
</tbody>
</table>

Source: Primary Data

9.2.1. **Product Design:**

The construct “Product Design” has an association with total quality management (TQM) at 1% level of significance. The TQM have an Influence on Effective Product Design. The Pearson Chi-Square test’s alpha is .000<.010 is evident that. The Linear-by-Linear association also shows the strong association between the above two variables at 1% level of significance. Hence, it is observed that TQM have an Influence on Effective Product Design in augmenting Competitive Advantage.

9.2.2. **Cost Consciousness:**

The results tabulated in the table 2, shows the Chi-Square Value 514.062 at alpha 0.000. The association between “Cost Consciousness” and total quality management (TQM) at 1% level of significance is established. It can be concluded that TQM has an Influence on “Cost Consciousness”. Further, the Linear-by-Linear association also shows the strong association between the two variables at 1% level of significance. Hence, it found that TQM has an Influence on “Cost Consciousness” in augmenting “Competitive Advantage”.

9.2.3. **Delivery Commitment to Customer:**

It is evident to establish the association between the constructs “Delivery Commitment to Customer” and total quality management (TQM) as it shows Chi-Square Value 417.518 at alpha 0.000 at 1% level of significance. It can be concluded that the TQM has an Influence on “Delivery Commitment to Customer”. Even, the Linear-by-Linear association also shows the strong association between these two variables. Hence, it concluded that TQM has an Influence on “Delivery Commitment to Customer” for increasing Competitive Advantage.
9.2.4. Flexibility in Managing the firm:

The association between the two attributes “Flexibility in Managing the Organisation” and total quality management (TQM), shows Chi-Square Value 561.815 at alpha 0.000 at 1% level of significance. It is concluded that the TQM has an Influence on “Flexibility in Managing the Organisation”. Further, the Linear-by-Linear association shows the strong association between the two variables at 1% level of significance. Hence, it observed that TQM have an Influence on Flexibility in Managing the Organisation increasing Competitive Advantage.

9.2.5. Summarised Results of Testing of Hypotheses:

The study observes that the respondents accepted the implementation of TQM for gaining the Competitive Advantage.

<table>
<thead>
<tr>
<th>The factors of Competitive Advantage</th>
<th>Results at Sig. Level 1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product design and TQM</td>
<td>Significant</td>
</tr>
<tr>
<td>Cost Consciousness and TQM</td>
<td>Significant</td>
</tr>
<tr>
<td>Delivery Commitment to Customer and TQM</td>
<td>Significant</td>
</tr>
<tr>
<td>Flexibility in Managing the firm and TQM</td>
<td>Significant</td>
</tr>
</tbody>
</table>

*Source: Data Analysis Tables*

Table 3 reveals that the Null Hypothesis (H₀) was rejected by accepting the Alternative Hypothesis (H₁). Therefore, the use of TQM plays a significant role in gaining Competitive Advantage of small & medium enterprises (SMEs).

10. CONCLUSIONS:

The study was conducted for finding the linkage between the TQM and Competitive Advantage, especially in Small and Medium Enterprises. The study has considered Karimnagar District for data collection. The respondents were chosen randomly with the purposive sampling technique. The study has restricted itself with selected constructs for TQM and carried out in SMEs. Finally, the study based on the results, concludes that the use of total quality management (TQM) in SMEs has been contributing significantly to gaining the Competitive Advantage of SMEs in the Karimnagar District. The study recommends generalising and replicating the same results elsewhere also. The TQM has a positive impact on the Competitive Advantage of SME units in particulars and any business firm in general. The study concludes with the recommendations that the SME units should redesign and make
suitable products/services to cater to the requirements of the customers and consequently increase their market share. Design suitable TQM training programmes for the employees. This will make sure that best practices of TQM and implemented to endure the competitive advantage.

12. REFERENCES: