

# Examining the Role of Total Quality Management in Small and Medium Enterprise (SMEs) Performance Using Deming Quality Philosophy in Ghana

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## Abstract

*As competition intensifies due to continuous change of taste and preference of consumers, firms seek to compete for a more significant share of customers by offering quality goods and services to meet their numerous demands. This study examined the role of Total Quality Management (TQM) in Small and Medium Enterprises (SMEs) performance using Deming quality philosophy in Ghana. Both qualitative and quantitative approaches were used to find out the TQM practices, motives, challenges and the impact of TQM by using Deming's quality philosophy in Ghana. Deming's assertion that if TQM philosophy is effectively adopted, the firm enjoys high customer satisfaction which eventually enhanced firm performance. According to SMEs, some of Deming's views are not easy to adopt in Ghana because of the lack of infrastructural development. Some of the recommendations raised to improve the application of Deming's quality philosophy are that SMEs should study the TQM concepts of Deming very well before they are adopting them.*

*Keywords: Total Quality Management, Deming Quality Philosophy and SMEs Performance*

## 1.0 INTRODUCTION

Total Quality Management (TQM) is a business quality concept or approach that looks critically not only at the products and services a company provides about the process it employs to create them and to ensure that outputs fully satisfy customer requirements. TQM seeks to integrate all organizational functions such as marketing, finance, design, engineering, production and customer service and many others. It focuses on meeting customer needs and corporate objectives. Therefore, TQM is a necessity and integrated effort directed at gaining a competitive advantage by continuously improving every facet of an organization's activities. It is a philosophy and a series of guiding justifications that are the basis of a ceaselessly improving organization (Shweta et al., 2018). According to Khanam et al., (2015), TQM intends to accomplish the efficient and effective systems in production, design, planning, quality tools, and techniques involvement towards customer satisfaction. They further stated that TQM has the potential not only to reinforce competitiveness but also to strengthen firm's effectiveness and produce more satisfied customers.

The ever-increasing global competitive nature of the business environment has forced corporations to develop strategies to become low-cost producers and to differentiate their goods and services from their competition. Through customer-focused quality programs, quality lowers the cost and will become a dominant product differentiation to customers (Ajayi & Oyeniya, 2017). Quality Management (QM) therefore, has become increasingly prevalent as one of the management strategies in ensuring customer satisfaction and loyalty as it seeks to improve products and service quality and reinforcing continuous improvement.

## 2.0 LITERATURE REVIEW

### 2.1 Total Quality Management originated by Deming

According to [www.smartsheet.com](http://www.smartsheet.com), much of our current understanding of the value and pursuit of quality traced back to William Deming. The American statistician, engineer, and management consultant laid many foundations for the use of statistics in production and work management field. Deming introduced statistical process methods to the US Census Bureau in the early 1940s, marking the first time they used in the business or service sector. During World War II, Deming advised US business and Government on statistical methods to help with planning for wartime manufacturing ([www.smartsheet.com](http://www.smartsheet.com)). After the world war, Deming was recruited by General Douglas MacArthur to

advise Japanese officials on census models to assess battle damaged and plan for rebuilding. According to Deming, these are the responsibilities of the organization's employees. Deming (1986), proposed the following 14 points as the principles of TQM:

1. Creating constancy of purpose toward the improvement of product and service to become competitive and to stay in business, and to provide jobs.
2. Cease dependence on mass inspection to quality. Eliminate the need for examination on a mass basis by building quality into the product in the first place.
3. End the practice of awarding business by the price tag. Instead, minimize total cost—any move toward a single supplier for any one item on a long-term relationship of loyalty and trust.
4. Improving continuous and forever the system of production and service, to improve quality and productivity, and thus steadily decrease costs.
5. Institute training on the job.
6. Institute leadership.
7. Driving out fear so that people may work effectively for the company.
8. Breaking down barriers between departments.
9. Eliminating of slogans, exhortations, and targets for the workforce asking for zero defects and new levels of productivity.
10. Eliminate work standards (quotas) on the factory floor—substitute leadership.
11. Removing barriers that robs the hourly worker of his right to pride of artistry.
12. Instituting a vigorous program of education and self-improvement.
13. Putting everybody on deck the company to work to accomplish the transformation.
14. Creating structures in top management that will push every day on the above 13 points

Deming's other contributions include the PDCA (Plan, Do Check, Act) or the PDSA (Plan, Do, Study, Act) cycle of continuous improvement, which Deming termed the Shewhart cycle, and the pinpointing of the seven 'deadly diseases'. Deming's approach, particularly his insistence on the need for management to change the organizational culture, is closely aligned with Japanese practice. It is not surprising given the assistance he gave to the Japanese after the Second World War. Late in his life, Deming defined his approach to management as a system of profound knowledge. Some Deming user groups and associations have been formed, which are dedicated to facilitating awareness and understanding of his work and helping companies introduce his ideas.

## 2.2 How TQM Influences Organizational Performance

Kurt and Zehir (2016) demonstrated the potential impact of TQM practices which includes the strategic quality planning, leadership, employee and management involvement, customer focus, supplier management, process management, customer satisfaction and continuous improvement on quality management. Brun (2010) also studied the relationship between organizational innovation and employees' performance with TQM practices. The results showed that different TQM practices such as training, employee management, process management, leadership, supplier management, continuous improvement, and customer focus have a positive impact on employee performance, firm performance and firm innovative performance. Joiner (2007) further indicated that firms that implement TQM might have a competitive advantage over those that do not implement TQM. Furthermore, Kwamega et al., (2015) provided another empirical backing, but on the successful implementation and practice of total quality management and its effect on SMEs' performance and survival.

## 3.0 RESEARCH METHODOLOGY

A survey approach was used to sample Small and Medium Enterprises in the newly created Asokwa Municipal in the Kumasi metropolis. Data collection were done from both structured questionnaire and interview schedules from the SME Operators and staffs. The questionnaire included the demographic factors of the respondents, the various concepts of the TQM, SMEs motivations for adopting TQM practices, SMEs perception of the Deming's 14 points and the general challenges of SMEs implementation of TQM. By providing in-depth analysis or description of the selected Small and Medium Enterprises, both qualitative and quantitative techniques were applied to measure the extent to which the

TQM implementation affects SMEs adaptation of TQM and SMEs performance. The population of this study includes all the SMEs in Asokwa Municipal of the Kumasi metropolis in Ghana. All categories of Small and Medium Enterprises were involved in the research and included the Food processing industry, Bakery industry, Timber/Furniture works industry, Metalworks industry, Machinery works industry, Financial Services and others. The sampling frame involved all the Small and Medium Enterprises within the Asokwa Municipal area both registered and non-registered firms at the Registrar General's office and Association of Ghanaian Industries (AGI) list.

A total of 165 selected SMEs Operators and staffs were used to survey the role of TQM of SMEs performance in Ghana using Deming's TQM philosophy. The sample included 115 respondents from SMEs staffs and 50 Small and Medium Operators for questionnaires and interview guide respectively. In finding the various concepts of Total Quality Management (TQM) practised by SMEs, a four-point Likert scale was used (4=Highly Important, 3= Important, 2= Not Important and 1= Not Aware). Also, a four-point Likert scale was used to discover the motivations for TQM philosophy by SMEs, Deming's 14 points on Quality Management and Challenges associated with TQM Philosophy implementation (4=Strongly Agree, 3=Agree, 2=Disagree and 1=Strongly Disagree). In achieving validity, questionnaires and interviews used included a variety of questions on the theory and implementation of TQM. Multiple regression analysis was used to analyze the data with Total Quality Management as the dependent variable and the other three variables (customer satisfaction, business efficiency and business growth) as the independent variables.

#### 4.0 FINDINGS AND DISCOVERIES

This study examined the role of total quality management in Small and Medium Enterprises (SMEs) performance using Deming quality philosophy in Ghana. The study objectives revealed the following findings and discoveries. The study revealed that SMEs in the Asokwa Municipal adopt TQM to achieve a quality product/service, improves employee performance, customer satisfaction and organizational growth as a motivation for the adoption of TQM philosophy. The other elements of the construct witnessed a low mean value on the enhancement of efficiency, Strategic, operational management and creation of good corporate culture. Also, 11 majorities of 14-points guide by Deming were revealed to be practised by SMEs in the Asokwa Municipal while three minorities of the points disagreed with Deming's assertion. The three points guide revelations are as follows; The SMEs in the Kumasi metropolis disagree with Deming on some claims because they find it challenging to adopt new philosophy as they did not see it as yielding any positive effect on quality and productivity of their offerings. Again, a mean response of 1.90 for an assertion that businesses must cease dependency on inspection to achieve quality implies that most SMEs respondents disagree with Deming. Also, most of the SMEs did not see training on the job for employees as a practice potential to increase the quality and productivity of offerings given mean value of 1.73.

Furthermore, SMEs in the Asokwa Municipal confirmed that lack of appropriate training happens to be the major challenge as far as TQM implementation is a concern. Though the respondents declined to the assertion that TQM implementation is costly, the interview is otherwise. According to SMEs Operators, "creating consistency of purpose for improving products enable us to obtain a competitive edge, but this point by Deming is costly and hard to implement". The study again revealed that "Ceasing dependency on the inspection may result in employee laziness which might affect the quality of offerings, if not carefully instituted". The firms which disagreed with Deming's position on eliminating employee targets, slogans, exhortations as employee motivation reiterated that "One's exhortations cease, employees, do not give out their best". Setting employee target and offering exhortations help employees work their hearts out, thereby increasing productivity". The SMEs further stated that "Our Company sets individual employee's quotas to reach organization's target. We ensure our individual targets aggregate to business targets".

#### 5.0 RECOMMENDATIONS

The following under listed recommendations/proposals are to assist policymakers in improving SMEs performances to support the economic development of Ghana.

The SMEs confirmed their application of the core TQM concept at the Asokwa Municipal area of the Kumasi metropolis. According to their order of importance, the SMEs upheld customers focus,

followed by quality products for the first time and lastly continuous improvement. It is therefore, recommended that all the core concepts of TQM are essential to their enterprise growth and should be integrated well and equally. Failure to attached one theory will affect the entire corporate objectives. They should also adopt long term concepts to define their pattern of operations aimed at creating customer loyalty.

Total Quality Management concepts place a lot of emphasizes on employees because they are the actors and producers of the continuous production of quality. These training programs can take a form of on the job training as well as external training. The external training can be through seminars, exhibitions attendants and also formal educational training.

Deming's 14-points guide of TQM has gotten support from SMEs in Asokwa Municipal of Kumasi metropolis in Ghana although the SMEs disagreed with few of his points. It is therefore suggested to SMEs to handle Deming's assertion "ceasing dependency on the inspection" from a different perspective other than physical inspection. In other words, the best working environment for reducing the need for the final examination arises when the individuals are aware of their responsibilities towards the quality and the processes by which they do their work.

It is also recommended to SMEs to adopt Deming's 14-Point guide if they want to stay ahead in their various industries. His 14-Points are not detailed at first hand and therefore confuse readers and organizations, so interested SMEs should investigate and find out the detailed concepts before they adopt it. Failure to research thoroughly will lead to a collapse in the application of his philosophies.

### 5.1 Conclusions

This study, therefore, concludes that SMEs in Ghana adopts the majority of Deming's Quality Philosophy and it is helping them to perform well regarding customer satisfaction, provision of quality goods and services and growth of their businesses. However, they face some challenges in the process of adopting TQM practices.

A few of Deming's quality philosophies are not adopted because they disagree with Deming's position and think the opposite of those views are working for them to develop their businesses. In all, SMEs appreciated the importance of the TQM towards the quality of production, customer satisfaction and business growth.

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