

The Continues Improvement and Its Role in Achieving the Competitive Strategies

Dr. Hamed Omar Abdalla

Department of Management, The World Islamic Sciences & Education University, Jordan

Abstract: *This study aims to clarify the impact of Continuous Improvement to achieve the competitive strategies in the Jordanian private industrial companies which won King Abdullah's II Award for Excellence. A questionnaire has been used as a tool to collect data from the industrial companies. Also, these study hypotheses were tested using a simple linear regression analysis. The study found out the existence of a weak positive impact of processes of continuous improvement in achieving market leadership strategy using the "overall cost" concept and the differentiation strategy. Hence, top management in these companies need's to work on reconstruction of its internal processes according to the principle and methodology of continuous improvement, which in turn, is based on the generation of creative ideas, design processes, and the innovative products.*

Keywords: Continuous Improvement, competitive strategies, TQM

1. Introduction

Modern administrative Concepts, since the early eighties, witnessed an important development leading to the emergence of the concept of Total Quality Management (TQM) by its first pioneers and scholars. This development was based on three foundations: focus on customer satisfaction, focus on teamwork and work groups, and focus on the continuous improvement of the management process (Weckenmann& Akkasoglu& Werner, 2015, 281- 290)[1]. As the impact of globalization growing stronger, a prominent feature in now a days, on the local and international markets, also its ability of removing the barriers and constraints that stand in the face of international trade, and finally turning the world into a small village and one large market, it was necessary for companies to continue adapting the competitive strategies that will ensure its survival and excellence in the presence of an intense competition on the local and global levels. As a result, many researchers developed different models of competitive strategies, notably the model (Porter, 1980) which provided general competitive strategies. This model was followed by some other models of competitive strategies were their content is based on the model of (Porter, 1980)[2] regardless of its names or categorizations (Kotler & Armstrong, 2014, 266-267)[3].

This study aims to determine the impact of continuous improvement in achieving the competitive strategies in the Jordanian industrial companies which won the King Abdullah II Award of Excellence in order to assist these companies in developing competitive strategies and owning a unique competitive advantage.

2. Literature Review

The principle of continuous improvement is considered to be one of the leading foundations that have been developed in the applications field of quality management. This principle works on improving the product and achieving its suitability for the continuous changes in the needs and desires of the customers based on precise

scientific method. Initially, this requires stability for the ongoing operations, which makes it easy to analyse, and facilitates the forecasting process in order to improved in the future (Kumar, Choisine, Grosbois & Kumar, 2009, 23-37)[4], in conjunction with the achievement of the initiativity, creativity and innovation requirements (Assaf, 2012, 26-29)[5].

The continuous improvements of operations are based on the following steps methodology: (Mylnek, Vonderembse, Rao & Bhatt, 2005, 7-11)[6]; Singh& Singh, 2015, 79-87[7]):

- a) Standardization and documentation of procedures.
- b) Assigning teams to identify the processes that need to be improved.
- c) The use of analytical methods and problems solving tools.
- d) The use of the "Deming" cycle for continuous improvement.
- e) Documentation of improvement procedures.

It should be noted that information technology is working with the efforts of the management and staff to restore the administrative process design, and improving its performance through different new methods giving the organization the ability to surpass their competitors with a competitive advantage that difficult to imitate or exceed (Al-Ali, 2009, 39)[8]. Porter (1980) competitiveness classification is one of the most adopted classifications by the researchers. It revolves around the competitiveness edge of the business organizations in various sectors (Chen& Miller, 2015, 760- 766)[9]. Based on this, this study adopted competitive strategies in Porters classification, namely: (Porter, 1980, 35- 40)[10]:

The first strategy: (Differentiation Strategy) it is defined as: "the strategy which aims to build a competitive advantage through market leadership through the differentiation of products or services from competitors" (Pitts & Lei, 2006, 322-323)[11].

The second strategy: (Overall Cost Leadership Strategy): is defined as: "the strategy which aims to build a

competitive advantage through the market leadership by low prices which derived from the reduction of the total cost of products or services" (Pitts & Lei, 2006, 322)[12].

The third strategy :(Focus Strategy): (Porter, 1980, 38-40)[13] is defined as: "the strategy, which aims to build competitive advantage by focusing on the part of the market by using the overall cost leadership strategy or the differentiation strategy " (Pitts & Lei, 2006, 343)[14].

Many studies have sought to show the role played by the continuous improvement in achieving the competitive strategies for business organizations. These studies indicated that Continuous Improvement which based on stepped methodology and the operations of research, development, and adoption of innovative processes , leads to improve the inputs, processes, and the outputs of the production process. The study(Okwiri, 2014, 1-9)[15], according to a scientific statistical, accurate, and documented methods, enhances the authenticity of the products and achieve the adaptation with developments and ongoing changes according to the needs and desires of customers, (Kismi, Ubud, Surachman & Solimun, 2013, 12-13)[16] leading to customer loyalty to the products and services of the organization even if prices have increased, compared to competitors' products prices, which is reflected positively on achieving differentiation strategy (Zhang & Xia, 2013, 9-13; Nouri, 2013, 9-11)[17].

Other studies showed that continuous improvement by focusing on the needs to match the product manufacturing accurately to its simple specifications design which I turn based on the needs of the customer to reduce the bad quality costs (non-conformity, amendments re-manufacturing, inspection and quality control, damage and wastage) (Magaa, Mugwindiri & Madanhire, 2013, 8[18]), ,as well as, approaching the methodology Zero Defect and 6-Sigma, which in turn reduce the overall cost of the productivity of the process, and achieve leadership strategy with overall cost. (Nikolaos, Dimitrios, & Fanourios, 2013,7-9[19])

3. Problem Definition

3.1. Study Module



Source: prepared by the researcher, where the study was developed based on the study of (Okwiri, 2014, 1-9), (Assaf, 2012.5-19), and study (Al-Ali, 2009.23).

Accordingly, the independent variable in this study is the focusing on the customer as one of the pillars of TQM

A dependent variable model's been developed, as well as, branching variables depending on (Porter, 1980) model, and therefore the dependent variable in this study is the competitive strategies, and the branching variables are the two strategies in Porter's model, namely:

- 1) Differentiation strategy.
- 2) Overall leadership cost strategy.

The third strategy, the concentration Strategy, in Porter's has been excluded because it relay's, as Porter pointed, to the preceding two main strategies. This is the practice of all the studies and published researches in this area. (Prajogo & Sohal, 2006[20]).

3.2. Hypotheses

Ho1: No effect of statistical significant at the abstract level ($\alpha \leq 0.05$) for continuous improvement in achieving the differentiation strategy for the industrial companies that won Jordanian King Abdullah II Award for Excellence.

Ho2: No effect of statistical significant at the abstract level ($\alpha \leq 0.05$) for continuous improvement in achieving the overall cost leadership strategy for the industrial companies that won Jordanian King Abdullah II Award for Excellence.

4. Methodology

- 1) This is a study is considered as illustrative study, to measure the continuous improvement factor effect on the competitive strategies for the industrial companies that won winning Jordanian King Abdullah II Award for Excellence award.
- 2) The study population consisted of workers in the three administrative levels in all of the 10 Jordanian industrial companies that won King Abdullah II Award for Excellence in years (1999 / 2000- 2013/2014). It included the following Job Titles: managers, heads of departments, members of the department of quality and sales. The population targeted expected number to be (342).
- 3) The study sample came as a stratified random sample of the form. The process began by distributing questionnaires to a sample study in 09/04/2014 and lasted until 06/03/2014. Were (297) questionnaire been distributed to the staff randomly, (273) questionnaire been collected back from the total questionnaires that were distributed. Post audit and show that all collected back questionnaires are valid for the analysis process. This means that the ratio of response in the sample is (90%) approx.
- 4) Questioners have been used as a tool to collect data and test hypotheses. Based on previous studies that relates to the variables of this study, the researcher developed the total quality management questionnaire based on the study (Prajogo & Sohal, 2006[21]). (Alok & Sushil, 2013[22]) and Also, the researcher

developed a questionnaire section on competitive strategies based on the study (Nouri, 2013[23]) and study (Nikolaos, Dimitrios, & Fanourios, 2013[24]) and study (Baroto et al., 2012[25]).

- 5) The questionnaire consisted of 31 questions to measure the variables of the study. Questions (1-9) to measure a variable focus on the customer, questions (10-17) to measure the differentiation strategy variable, and questions (18-23) to measure the overall leadership strategy using total cost. Likert Scale was used to measure the respondent's answers to a questionnaire since this scale is one of the common standards in administrative and human studies
- 6) Consistency coefficient Cronbach's Alpha was calculated for the variables of the study. The result of the independent variable of focusing on the customer (0.877), the result of the dependent variable of the differentiation strategy (.882), the result of dependent variable of the driving strategy with overall cost (0.712). All coefficients were greater than (0.60 value) indicating the consistency between the study tool, the reliability of the study tool, and the reliability of statistical analysis.
- 7) The veracity of the questionnaire was done by using 9 arbitrators specialized in quality, 8 arbitrators specialized in competitive strategies. Also, the questionnaire variables were subjected to the "Factor Analysis" Principle, where all results came greater than (0.40), therefore all the variables considered to be of a high credibility for the process of analysis and getting results.

Both hypothesis of the study were tested using simple linear regression analysis Simple linear regression, as well as, One-Way ANOVA, the results were as follows:

5. Results & Discussion

5.1. Demographic analysis

Analysis result showed that there is a statistically significant difference in the total quality management among respondents according to their scientific qualification: holders of diploma or less, Bachelor, and post graduate. The value of the difference between the (diploma or less) and the (BA) is (.20042) in favor of (diploma or less). The value of the difference between the (diploma or less) and the (graduate) is (.25594) in favor of (diploma or less) at abstract level of ($\alpha \leq 0.05$). This value may be due to the fact that (diploma or less) are usually in lower administrative positions, which may increase the level of interest in assessing the overall quality management applications since they are closer to the product and improvements that being carried on it. The results also showed a difference of statistically significant in the competitive strategies between respondents according to qualification, between the (diploma or less) and both (BA) and (graduate), where the value of the difference between (diploma or less) and (BA) is (.18747) in favor of (diploma or less). Also, the value of the difference between (diploma or less) and (graduate) is (.37084) in favor of (diploma or less) at the level of ($\alpha \leq 0.05$). This may be due to the fact that

(diploma or less) are usually in lower administrative positions, which may increase the level of interest in assessing the competitive strategies applications as they are more administrative levels closer to the customers and therefore more confident about their needs and requirements.

5.2. Test the first hypothesis Ho1

Ho1: No effect of statistically significant at the abstract level of ($\alpha \leq 0.05$) for continuous improvement in achieving the overall cost leadership strategy.

Table 1: * Test result of the effect of continuous improvement in achieving overall cost leadership strategy results.

Following Variable		Overall Cost Leadership Strategy
R		0.356
R ²		0.127
F		39.432
Df		1
*Sig F		0.000
Regression Factor	Details	Continues Improvement
	β	0.196
	The standard error	0.031
	T	6.279
	Sig t*	0.000

*Effect is of significant statistical value at level ($\alpha \leq 0.05$)

Table (1) indicating that the dependent variable (leadership strategy using total cost) is an effect with statistically significant depending on the value of F as (39.432) with level of significance (Sig F = 0.000) which is less than 0.05. However, Since the correlation coefficient is ($r = 0.356$), it indicates a positive and weak relationship between the two variables, in addition, the value of the coefficient of determination was ($r^2 = 0.127$) and this emphasizes the significance of the regression of 12.7% of the variation in the (leadership strategy of total cost) which can be explained by the variation in the (continuous improvement).

It also been found from the regression coefficients that (β) value amounted to (0.196), while the value of (t) was (6.279) with level of significance (Sig = 0.000). This confirms the significance of regression coefficient. Based on this, we cannot accept the third nihilism sub-hypothesis, and accept the alternative hypothesis, which states that:

There is a statistically significant effect at the abstract level ($\alpha \leq 0.05$) for continuous improvement in achieving the overall cost leadership strategy.

These results are in line with the results of a study (Magaa et al., 2013) and study (Nouri, 2013, 9-11). In stating that the methodology of continuous improvement in the administrative and technological processes has a positive impact in reducing the total costs of the production process, thereby achieving the total cost leadership strategy.

This result indicate that the industrial Jordanian companies that won King Abdullah II Award for Excellence dependence on applying the principle of continuous improvement in achieving leadership strategy total cost is very weak. This may be due to the prevailing belief in these companies about their inability to achieve overall cost leadership strategy. In turn, this is due to the weak attention of these companies to the stability of its operations in the internal environment, as well as, the weakness of adopting strategies that take care of the development of creativity among workers.

Based on what been said, the second hypothesis (Ho2) can be tested using Multiple Linear Regression and Stepwise Linear Regression

5.3. Testing the second hypothesis Ho2

Ho2: No effect of statistically significant at an abstract level ($\alpha \leq 0.05$) for continuous improvement in achieving differentiation strategy.

Table 2:* The test result of continuous improvement in achieving the differentiation strategy Results

Following Variable		Differentiation Strategy
R		0.491
R ²		0.241
F		86.196
Df		1
*Sig F		0.000
Regression Factor	Details	Continues Improvement
	β	0.411
	The standard error	0.044
	T	9.284
Sig t*		0.000

*Effect is of significant statistical value at level ($\alpha \leq 0.05$)

The results in table (2) shows the impact of the independent variable (continuous improvement) on the dependent variable (differentiation strategy) is a statistically significant effect depending on the value of calculated F, namely, (86.196), at level of significance (Sig = 0.000), which is less 0.05 while the correlation coefficient ($r = 0.491$). This result indicate positive and weak relationship between two the variables. In addition, the value of the coefficient of determination was ($r^2 = 0.241$) and this confirms a significant decline, which indicate that 24.1% of the variance in (differentiation strategy), it can be explained by the variation in (continuous improvement).

It also been found from the regression coefficients that (β) value amounted to (0.411), while the value of (t) at this level was (9.284) with a level of significance (Sig = 0.000). This confirms a significant regression coefficient, and based on this we cannot accept third nihilism sub-premise, and accept the alternative hypothesis which states that:

There is a statistically significant effect at the abstract level ($\alpha \leq 0.05$) for continuous improvement in achieving the differentiation strategy.

This result is in line with the results of a study (Zhang & Xia, 2013) and (Okwiri, 2014), in stating the existence of a relation s of a direct and positive impact on the operations of continuous improvement in achieving differentiation strategies and standing ahead of competitors.

This result indicates that the Jordanian industrial companies that won King Abdullah II Award for Excellence award are successfully applying the principle that focusing on continuous improvement in all its operations. This also explains the direct positive impact of these principles in achieving the differentiation strategy.

Based on the above, the first main hypothesis (Ho1) can be tested using multiple linear regression analysis and Stepwise Linear Regression

6. Conclusion

The study provided a theoretical model in order to build hypotheses for the study and it clarified the impact of Continuous Improvement factor on applying the competitive strategies. Based on the data that has been collected and analyzed, the study concluded that the presence of a weak impact of the of continuous improvement processes on the competitive strategies of the industrial companies that were the subject of the study analysis.

References

- [1] Weckenmann, A., Akkasoglu, G. , Werner, T. (2015). Quality management – history and trends, *The TQM Journal*, 27 (3), 281 – 293
- [2][10][13]Porter, M. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press.
- [3] Kotler, Ph., & Armstrong, G. (2014) *The Principles of Marketing* (15th ed). Upper Saddle River/NJ: Prentice Hall
- [4] Kumar, V., Choisine, F., Grosbois, D., & Kumar, U. (2009). Impact of TQM on Company's Performance. *International Journal of Quality & Reliability Management*, 26 (1).
- [5] Assaf ,Abdulmuti , (2012) ,Towards a Global Philosophy of Management (I philosophy for supremacy) , Baghdad College Journal for Economic Sciences .
- [6] Mylnek, P., Vonderembse, M., Rao, S., & Bhatt, J. (2005). World Class Manufacturing: Blueprint for Success. *Journal of Business and Management*, 11, 7-24.
- [7] Singh, J., Singh, H. (2015) Continuous improvement philosophy – literature review and directions, *Benchmarking: An International Journal*, 22 (1), 75 – 119.
- [8] Al-Ali Abdussattar ,(2009), Applications in TQM , Jordan , Amman , Almaseerah publishing and distribution.
- [9] Chen, M., Miller, D. (2015). Reconceptualizing Competitive Dynamics: A Multidimensional Framework. *Strategic Management Journal*, 36(5), 758–775.
- [11][12][14]Pitts, R., & Lei, D. (2006) *Strategic management: building and sustaining competitive advantage* (4thed). OH; South-Western.

- [15] Okwiri, O.(2014) Quality Management as an Outcome of Management Field Evolution, *A Review, Online Journal of Social Sciences Research*, 3(1).
- [16] Kismi, S., Ubud, S., Surachman, A., Solimun. A. (2013). Competitive Strategy: As Mediation the Effect of External Business Environment and Total Quality Management Implementation Toward Company Performance. (Study at ISO 9000 certified manufacture companies in East Java, IOSR). *Journal of Business and Management*, 8(2), 7-20.
- [17] Zhang, G., & Xia, Y. (2013). Does Quality Still Pay? A Reexamination of the Relationship between Effective Quality Management and Firm Performance. *Production and Operations Management*, 22(1), 120–136.
- [18] Magaa, F., Mugwindiri, K., & Madanhire, I. (2013). Use of Total Quality Management (TQM) and Statistical Process Control (SPC) In Enhancing Business Competitiveness - An Investigation "Into Zimbabwean Manufacturing Companies. *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, 2(6), 171-178.
- [19][24] Nikolaos, L., Dimitrios, T., & Fanourios, Z. (2013). Absence of TQM across the fuel supply chain: quality failure-associated costs. *Total Quality Management & Business Excellence*, 24 (4), 452-461.
- [20][21] Prajogo, D., & Sohal, A. (2006). The relationship between organization strategy, total quality management (TQM), and organization performance– the mediating role of TQM. *European Journal of Operational Research*, 168(1), 35-50.
- [22] Alok, S., & Sushil, A. (2013). Modeling enablers of TQM to improve airline performance. *International Journal of Productivity & Performance Management*, 62(3), 250-275.
- [24] Nouri, M. (2013). A Comprehensive Total Quality Management Strategy and Organization. *International Journal of Engineering Research and Development*, 7(1), 94-99
- [25] Baroto, M., Abdullah, M., & Wan, H. (2012). Hybrid Strategy: A new Strategy for Competitive Advantage. *International Journal of Business and Management*, 7(20), 120- 133

Author Profile



Dr. Hamed Omar Abdalla: Faculty in Department of Management Member in The World Islamic Sciences and Education University, Jordan & Quality Director in Sulaiman Abdul Aziz Al Rajhi Funding , Saudi Arabia