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Manager's perspective on ISO9001 quality management system and performance of suppliers: A study on the second largest automaker company in Iran

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Abstract

One of the most essential factors has an effect on the success of small and a medium enterprise is to concentrate on quality and quality management system. Although there are many companies certified by ISO9001 QMS in Iran and other countries, the relationship between the standard and its effects on their performance, are not evaluated and comprehended therefore, judgment about the effectiveness and efficiency it for the owners, shareholder, managers and employee of organizations are ambiguous. Nowadays, organizations are implementing the standard for several purposes such as meeting customer needs, meeting globalization requirements, creating a good image for their products. For all the mentioned purposes, applying and maintaining the standards needs a lot of costs and recourses. Finding a transparent response to this question is necessary. The purpose of the current study was to examine the performance of the suppliers the second automaker companies in Iran namely SAIPA which has been certified by ISO9001QMS through a balanced scorecard model. Self-administered questionnaire was used to collect required data for the sample of the study. The results indicate that ISO 9001 quality management system could lead to performance improvement of such companies in Financial, Customer, Internal Processes and Learning and Growth perspectives and also had played the main role in their growth and improvement.

Keywords

ISO 9001, Balanced Scorecard, SMEs, Performance

1. Introduction

At the end of December 2011, at least 1,109,905 ISO 9001 certificates were issued in 176 countries and economies (ISO survey, 2011). Globalization has fundamentally changed the game of business. To compete in this competitive environment, organizations need to apply a common language for business. Today's standards are being considered as a common language in the business world. In the past two decades, ISO 9001 standard has been a way to achieve this common language. The quality management system has been developed in such a way to be able to suit small and medium size firms as well as different business areas. Since its first draft, the quality management system has been revisited thrice in 1994, 2000 and 2008. ISO 9000 is developed to provide a basis for establishing, establishing and maintaining a reliable and noticeable quality management system [13]. The quality management system doesn't guarantee final product quality, because it originated as a quality management framework applicable for organizations and not for products. In order to obtain ISO 9001 quality management system, a company

has to go through a heavy burdensome process, which is known to be expensive and time consuming. The price and time vary depending on the organization. On top of that bottom line, the standard requires yearly maintenance budget as well. Due to conflicting opinions about the effect of the standard on the performance of companies especially SMEs companies; this study is trying to investigate this issue with a comprehensive approach.

2. Statement of Problem

The importance of SMEs for economic and industrial development especially for export of a country is completely obvious to everyone. Success of SMEs depends on many factors, such as having a strategy for existence in markets, applying Quality Management Systems, having a suitable corporate finance strategy. Among all mentioned above, Quality Management Systems are an important factor that can play a crucial role for them. There are many companies in the world and Iran which have decided to apply ISO9001 QMS and have been certified by it. The expenditure of standard great and it's impossible for SMEs which usually face financial problems. So it will decrease intention of such companies to apply this system. For examining the effectiveness of ISO9001 QMS, many studies have been done, but lots of them were just case studies and were less theory base [30].

Considering the increasing number of SMEs in which are certified or to be certified by ISO 9001, it is necessary to conduct a comprehensive research with practical approaches and by using valid theories and concepts. This study leads to the following main question: What are the impacts of ISO 9001 quality management system on SMEs performances? So far, a comprehensive research that can answer this question has not been done in Iran. Answering this question can show the necessity or likewise in establishing such systems for companies and their owners and then for counselors and the government that have decided to pay the cost of consulting for these companies. In addition, it paves the way for them to investigate on the causes of the advantages or disadvantages of such systems in Iran and also helps government organizations in decision making. In this study of measuring performance the SMEs Balanced Scorecard model will be applied. According to this model, performance of the organizations evaluated in four perspectives including Financial, Internal Process, Customers, and Learning and Growth**.**

3. Research Objectives

The objectives of this study are to gain better understanding on effective establishing and implementing ISO 9001 QMS on SMEs performance. The main objective of this study is:

To inspect the effects of ISO 9001 QMS on firm performance in SMEs. Following the main objective, some secondary objectives include:

To examine the effects of ISO9001 QMS on the financial perspective in SMEs.

To examine the effects of ISO9001 QMS on the learning and growth perspective in SMEs.

To examine the effects of ISO9001 QMS on the internal perspective in SMEs.

To examine the effects of ISO9001 QMS on the customer perspective in SMEs.

4. Literature Review

The effect of ISO 9001 on SMEs performance has attracted the attention of many researchers. Previous researchers have reported different opinions about the effect of ISO 9001 QMS on corporate performance. In many cases, these comments are consistent with each other and in some cases quite conflicting. IN the section will examine some of the pros and cons opinions about the standard.

A: The Effect of ISO/ 9001 on SMEs Performance According to Pros Points of View

The positive effect of ISO 9001 on SMEs performance according to pros points of view are: As a Signals of quality assurance to external parties [1], enhancing production system according to the customers' requirements [2], as a "Necessary evil", in which is mandated by purchasers, particularly large organizations and government departments [6], increasing awareness of workforce about quality, increasing team-working approach in organization, promoting diagnosis of quality problems [5], enhancing quality awareness, improvement of product quality [6], enhancing of companies performance [4], improving the time-based efficiency of operations process [10], outweighed the advantages of ISO 9000 than the disadvantages [9], improving quality of products, Increasing quality awareness of employees, improving internal communication channels, systematic approach to employee training, increasing customer demand and easier attraction of new customer [8], improving product quality and market share [12]. Establishing effective mechanisms to control business, increasing sales, reducing cost, increasing productivity and decreasing customer complaints [21], systematic and purposeful and approach to identify: Customer needs, responsibilities and authorities, defining activities and tasks, assigning qualified, authorized personnel to execute, supervise, manage and control the activities [19], improving perception of quality and its positive effect on their performance [18], guaranteed high demand, Increasing productivity, and decreasing production costs in the long run [20].

Increasing competitive advantage of the organization as an external profit , quality awareness as internal profit [23], reduction of defective products and customer complaints, and business performance such as profitability and productivity [27], an effective tool for measuring organization performance measurement improving operations efficiency, and market share, improve communication channel between management and

employees, provides the basis for a communication networked in the internal and external of organization [26], improving product realizing, Improving performance measurement system, improving effectiveness performance maintenance facilities, optimizing inventory level [29].

B: The Effect of ISO 9001 on SMEs Performance According to Cons Points of View

Although most studies reported the positive side of ISO 9001QMS, there are some studies which do not show any positive correlations between organization' performance and ISO9001 QMS such as: SMEs firms have experienced that skilled labor is one of the most important factors contributing to their growth and ISO 9001 does not have any positive impact on its performance [3], ISO 9000 is not a quality standard, but is a management control procedure, which involves all organization in documenting processes and doesn't have any effect in quality of product [9], ISO 9001 QMS is resource base standard and due to lack of human and non-human resources in SEMs this standard is not able to help to the companies [14], SMEs to attend in the global market need a highly motivated, skilled and satisfied workforce to be able to produce products with competitive price. ISO9001 QMS cannot be an efficient tool for the companies [15], certified companies are pressured by customers to adopt ISO 9001 QMS and without the customer pressure and they do not want to create it. For the companies the benefits had been less than its costs [17], the framework the standard is too much emphasis on conformance rather than on efficiency [25], the standard is based on the external and internal inspections; both controls are associated with bureaucracy. Inspection increases errors, adds to costs, and decreases morale [24].

According to the research literature, and to determine the parameters that affect the on the organizational performance and the role of organization process on the amount of the performance, it is possible to evaluate the organization performance as below. At the organizational level, Organizational performance appraisal models, principally examine the relationship between customer and organization. At this level will be examined how to do the main activities of the organization as well. At this level, effective factors on performance are strategies, goals and objective, approach of the organization to human resource, organizational structure and its relation with organizational process and utilization of other resources.

Traditionally, organizational design has been heavily influenced by the command and control structure of ancient military organizations. By introduction of Scientific Management theory most organizations today are designed as bureaucratic organizations in which authority and responsibility are arranged in a hierarchy. Within the hierarchy rules, policies, and procedures are uniformly and impersonally applied to exert control over members' behaviors. Activity is organized within sub-units (bureaus, or departments) in which people perform specialized functions such as manufacturing, sales, or accounting. People who perform similar tasks are clustered together.

It is important to mention here that we are not going to controvert the role of traditional approach to organizational design. In fact, this study is trying to say that in this approach, usually, processes of an organization are disappeared or paid attention less. In reality, functional structure is succeeded by process approach. It is obvious that both process performance and functional performance must be monitored. Some investigators for quality management systems as a means for producing products according to customer need and expectation mention the following advantages:

Reviewing organization activity according to organization's objective and eliminating defects, Reviewing organization's process and indexes according to organization needs, Preventing of reworking due to planning and systematic activities, Reducing Cost, reduction establishing guarantee and confidence in internal organization (employee and managers), Establishing guarantee and confidence in external organization (customer), Increasing competitive power in international environment [31].

One way to measure organizational performance is the Balanced Scorecard model, which refers to two major concepts in organizations. The first is the emphasis on setting goals and strategy at all levels of the organization, and then evaluates success in achieving defined goals. The second basic concept is the balanced scorecard model emphasizes on four perceptual concept of organization, Kaplan and Norton found that decision-making process in an organization has been affected by constraints and financial parameters two of the most obvious of them is the following:

First, financial parameters reflect the results of past decisions, that caused value added. These factors and criteria will not necessarily lead to the creation of value for the future. The second subject, organizational decisions are only based on short-term interests and are according short-term benefits of projects and programs this is a threat to the survival of the organization. For solving these problems and issues which have already been mentioned, Kaplan and Norton have suggested four perspectives in balanced scorecard as follows;

Financial perspective: do all stockholders of the organization are satisfied for our performance? Costumer's perspective: how our customers think about us? Internal process perspective: in which field, should we be excellent and have a competitive advantage? Learning and growth perspective: can we continue to have continuous improvement and creation of added values for the customers?

Despite all objectives and clear definition of Quality Management System of ISO9001 and its expansion universally, the value of these certificates are still not clear for achieving the business. Thus, the aim of this study is to identify the variants that can help identify the benefits of Quality Management System of ISO9001, especially, in

industry SME sectors.

5. Hypothesis Testing

Based on the objective of this study, this research has developed 5 hypotheses to be tested. The hypotheses are:

Objective1: To inspect the effects of ISO 9001 QMS on firm performance in SMEs.

H1: Establishing and implementing ISO9001 QMS has a positive effect on firm performance in SMEs.

Objective 2: To examine the effects of ISO9001 QMS on the financial perspective in SMEs.

H1A: Establishing and implementing of ISO9001 QMS has a positive effect on the financial perspective in SMEs.

Objective 3: To examine the effects of ISO9001 QMS on the learning and growth perspective in SMEs.

H1B: Establishing and implementing of ISO9001 QMS has a positive effect on learning and growth perspective in SMEs.

Objective 4: To examine the effects of ISO9001 QMS on the internal perspective in SMEs.

H1C: Establishing and implementing of ISO9001 QMS has a positive effect on internal process perspective in SMEs.

Objective 5: To examine the effects of ISO9001 QMS on the customer perspective in SMEs.

H1D: Establishing and implementing of ISO9001 QMS has a positive effect on customer perspectives in SMEs.

6. Research Schema

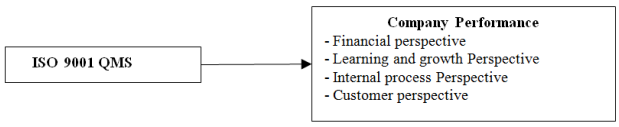

Figure 1. *Research Schema.*

7. Research Methodology

The methodology of this study is of descriptive (non-experimental) and surveying type. It is descriptive because it provides an image of status quo and is surveying because it collects the information of population by questionnaire and by enjoying from surveying methods. This study is among applied studies based on its objective because in this study, we are seeking for performance of the suppliers of the second Iranian automaker company, namely Saipa. The population of this study includes 500 suppliers of the second Iranian automaker company namely Saipa in which all of them were SMEs.

8. Questionnaire Design

A self-administered questionnaire method for collecting primary data is used. The questionnaire consists of two sections and 48 close-ended questions. The first section has 18 questions and includes the questions about the effective of establishing and implementing of quality management system ISO 9001 in SMEs in general view. The second section has 30 questions that had been designed for measuring performance SMEs enterprise in four perspectives including, financial, customer, internal process and learning and growth. Five point Likert scale is used for statements of two sections, ranging from "1" for "strongly disagree", to "5" for "strongly agree**".** This part includes the questions about the effective of establishing and implementing of quality management system ISO 9001 in SMEs in general view**.**

9. Statistical Testing

The Explanatory statistic was used as this study for statistical data analysis. Lisrel 8.52 and SPSS software has been used in methods of statistical analysis to analyze the impact of ISO 9001 QMS on the four perspectives of the Balanced Scorecard.

10. Data Collection

500 self-administered questionnaires were distributed among the general manager of the companies and they returned 460 completed useable questionnaires for response rate of 92%.

11. Validity of Questionnaire

For evaluating validity of measures, the content of the questionnaire had been approved by the related professional lead auditor and the knowledgeable specialist in balanced scorecard model. And then some modifications have been done, so it is proved that this questionnaire is evaluating the expected determined results. For evaluating validity of questionnaire in the second stage, the factorial validity of the questionnaire is examined by factor analysis model and Lisrel 8.52 software. It should be mentioned that in order to confirm model or factorial validity, first, its indexes should have Goodness of Fit and the second, the amounts of t-value and standard coefficients should be significant, too. The result of obtaining factor analysis by means of Lisrel 8.52, in which parameters can be explained that are: Chi-square, the Rooted Mean Square Error of Approximation (RMSEA), The Goodness of Fit Index (GFI), and The Adjusted Goodness of Fit Index (AGFI).The chi-square to degrees of freedom ratio (χ^2/df) suggests how much larger chi-square is from what we expected, with values $0 \leq \chi^2/df \leq 2$ indicate good fit and with value $2 \leq \chi^2/df \leq 3$ indicating acceptable fit.

The Rooted Mean Square Error of Approximation (RMSEA) provides a measure of the difference between the actual and estimated variance-covariance matrix per degree of freedom with values equal to and less than 0.05 indicating a good model fit and values less than 0.08 indicating a reasonable fit. The Goodness of Fit Index (GFI) test shows whether the measurement model of interest

represents an improvement relative to an independent model, with values equal between 0.95-1 indicating a good model fit and with values between 0.9 - 0.95 indicate an acceptable model fit. The Adjusted Goodness of Fit Index (AGFI) test shows whether the measurement model of interest represents an improvement relative to an independent model, with values equal between 0.9-1 indicating a good model fit and with values between 0.85 – 0.90 indicate an acceptable model fit. In addition, if t-value is larger than 2, the quantity is significant in the confidence level of 99%.

Validity of dependent variables indicates, RMSEA = 0.038 that is less than 0.05. Due to the above mentioned explanation the value indicating a good model fit. Furthermore, another item is GFI that shows 0.95, by considering the acceptable range based on the model between 0.95-1 the result indicating a good model fit. AGFI =0. 92 also follow good model fit. The chi-square to degrees of freedom ratio (χ^2/DF) is 1.16 which the chi-square is 19.77 and the degree of freedom follows the number of items or questions minus one is 17. This figure is between $0 \leq \chi^2/DF \leq 2$, so it indicates the good fit model. T-value of 18 questions is more than 2, so model is fitted and validity of these items is acceptable.

Validity of independent variables indicate, RMSEA = 0.048 that is less than 0.05. Due to above mentioned explanation the value indicates good model fit. Furthermore, another item is GFI that shows 0.93, by considering the acceptable range based on the model between 0.9 - 0.95 indicates an acceptable model fit. AGFI =0. 90 also follow good model fit. The chi-square to degrees of freedom ratio (χ^2/DF) is 0.51 which the chi-square is 14.87 and the degree of freedom follows the number of items or questions minus one is 29. Totally, this figure is between $0 \leq \chi^2/df \leq 2$, so indicates good fit model. T-value of 30 questions is more than 2, so the model is fit and validity of these items is acceptable.

12. Data Analysis Method

After collecting the required data, they were analyzed by using SMEs SAIPA suppliers in Tehran province.

13. Research Framework

Based on the literature review, a model of influencing of ISO 9001 QMS on the SMEs performance has been developed. Model of ISO9001 QMS is the first stage for having an impact on performance. Companies which improved their production parameters through the experience of ISO9001 added their values by presenting an added value to their customers. Moreover, this model shows that this system finds all production parameters and competitive advantages through satisfying its customers communicate with organizations performance. It's expected that applying ISO9001QMS creates new production capabilities which have affected on all competitive advantages as a result improves the customer's satisfaction and finally will cause to improve company's performance. All aspects of performance are defined based on BSC model. In the context of the framework, establishing and implementing ISO 9001 QSM is a dependent variable, while independent variables comprise of financial, customer, learning and growth and internal process.

14. Data Analysis

This section provides information about the data analysis process in this study.

14.1. Hypothesizes Testing

For evaluation of the causative relation in hypothesizes among independent and dependent variables Structural Equation Modeling and Lisrel 8.52 software have been used. Based on the objective of this study, this research has developed 5 hypotheses to be tested. To evaluate the hypotheses, first of all the secondary objectives are examined and then based on the obtained results so that the main objective is examined. If all of the secondary objectives are accepted, so the main objective is accepted too. In the first figure, the relation of Quality Management System ISO9001 with 4 dependent variables has been evaluated and the next figure shows a part of the results of Structural Equation Modeling. Table 5 shows a summary of examining the hypothesis main and secondary by Structural Equation Modeling. That last table is number 6 that is the Spearman rank correlation coefficient for evaluation of hypotheses. Based on the objectives of this research, hypotheses consist of;

Main Objective:

To inspect the effects of ISO 9001 QMS on firm performance in SMEs.

H1: Establishing and implementing of ISO 9001 QMS has a positive effect on firm performance in SMEs.

Secondary Objective 1:

To examine the effects of ISO9001 QMS on the financial perspective in SMEs.

H1A: Establishing and implementing of ISO 9001 QMS has a positive effect on the financial perspective in SMEs.

Secondary Objective 2:

To examine the effects of ISO9001 QMS on the learning and growth perspective in SMEs.

H1B: Establishing and implementing of ISO 9001 QMS has a positive effect on learning and growth perspective.

Secondary Objective 3:

To examine the effects of ISO9001 QMS on the internal perspective in SMEs.

H1C: Establishing and implementing of ISO 9001 QMS has a positive effect on internal process perspective in SMEs.

Secondary Objective 4:

To examine the effects of ISO9001 QMS on the customer perspective in SMEs.

H1D: Establishing and implementing of ISO 9001 QMS

has a positive effect on the customer perspective.

14.2. Evaluation of Secondary Objectives

Secondary Objective 1:

To examine the effects of ISO9001 QMS on the financial perspective in SMEs.

H1A: Establishing and implementing of ISO 9001 QMS has a positive effect on the financial perspective in SMEs.

Table 1. *Structural Equation Modeling Hypothesize test-ISO9001: Financial Perspective (FP).*

Model	Hypothesizes	RMSE	GFI	AGFI	Z	T	χ2 :df	Result
1	ISO9001:FP	0.041	0.93	0.91	0.19	3.74	2.37	Accept

As a result of table 1, RMSEA = 0.041 is less than 0.05. Due to the above mentioned explanation the value indicates good model fit. Furthermore, another item is GFI that shows 0.93, by considering the acceptable range based on the model between 0.9 - 0.95 indicates an acceptable model fit. AGFI =0. 91 also follow good model fit. The chi-square to degrees of freedom ratio (χ^2/df) is 2.37, in view of the acceptable range for this parameter is determined by the following criteria: Values $0 \leq \chi^2/df \leq 2$ indicate good fit and with value $2 \leq \chi^2/df \leq 3$ indicating acceptable fit, this figure is acceptable. T-value is 3.74 in which greater than 2 that for confidence interval 99% is significant, so the assumption H1 is acceptable and H0 is rejected.

Secondary Objective 2:

To examine the effects of ISO9001 QMS on the learning and growth perspective in SMEs.

H1B: Establishing and implementing of ISO 9001 QMS has a positive effect on learning and growth perspective in SMEs.

Table 2. *Structural Equation Modeling Hypothesizes test-ISO 9001: Learning & Growth (LG).*

Model	Hypothesizes	RMSE	GFI	AGFI	Z	T	χ2 : df	Result
2	ISO9001: LG	0.033	0.92	0.90	0.40	8.36	2.37	Accept

As a result of table 2, RMSEA = 0.033 that is less than 0.05. Due to above mentioned explanation the value indicates good model fit. Furthermore, another item is GFI that shows 0.92, by considering the acceptable range based on the model between 0.9 - 0.95 indicates an acceptable model fit. AGFI =0. 90 also follow good model fit. The chi-square to degrees of freedom ratio (χ^2/df) is 2.37, in view of the acceptable range for this parameter is determined by the following criteria: Values $0 \leq \chi^2/df \leq 2$ indicate good fit and with value $2 \leq \chi^2/df \leq 3$ indicating acceptable fit, this figure is acceptable. T-value is 8.36 in which greater than 2 that for confidence interval 99 % is significant, so the assumption H1 is acceptable and H0 is rejected.

Secondary Objective 3:

To examine the effects of ISO 9001 QMS on the internal process perspective in SMEs.

H1C: Establishing and implementing of ISO 9001 QMS has a positive effect on internal process perspective in SMEs.

Table 3. *Structural Equation Modeling Hypothesize test-ISO9001: Internal Process (IP).*

Model	Hypothesizes	RMSE	GFI	AGFI	Z	T	χ2 : df	Result
3	ISO9001 : IP	0.053	0.94	0.92	0.25	5.36	2.37	Accept

As a result of table 3, RMSEA = 0.053 that is less than 0.05. Due to above mentioned explanation the value indicates good model fit. Furthermore, another item is GFI that shows 0.94, by considering the acceptable range based on the model between 0.9 - 0.95 indicates an acceptable model fit. AGFI =0. 92 also follow good model fit. The chi-square to degrees of freedom ratio (²/df) is 2.37, in view of the acceptable range for this parameter is determined by the following criteria: Values 0 . ²/df . 2 indicate good fit and with value 2 . ²/df . 3 indicating acceptable fit, this figure is acceptable. T-value is 5.36 in which greater than 2 that for confidence interval 99 % is significant, so the assumption H1 are acceptable and H0 is rejected.

Secondary Objective 4:

To examine the effects of ISO 9001 QMS on the customer perspectives in SMEs.

H1D: Establishing and implementing of ISO 9001 QMS has a positive effect on the customer perspective.

Table 4. *Structural Equation Modeling Hypothesize test-ISO9001: Customer Process (CP).*

Model	Hypothesizes	RMSE	GFI	AGFI	Z	T	χ2 : df	RESULT
4	ISO9001 : CP	0.043	0.95	0.93	0.16	3.72	2.37	Accept

As a result of table 4, RMSEA = 0.043 that is less than 0.05. Due to above mentioned explanation the value indicates good model fit. Furthermore, another item is GFI that shows 0.95, by considering the acceptable range based on the model between 0.9 - 0.95 indicates an acceptable model fit. AGFI =0. 93also follows good model fit. The chi-square to degrees of freedom ratio (χ^2/df) is 2.37, in view of the acceptable range for this parameter is determined by following the criteria: Values $0 \leq \chi^2/df \leq 2$ indicate good fit and with value $2 \leq \chi^2/df \leq 3$ indicating

acceptable fit, this figure is acceptable. T-value is 3.72 in which greater than 2 that for confidence interval 99 % is significant, so the assumption H1 are acceptable and H0 is rejected.

Main Objective:

To examine the effects of ISO 9001 QMS on SMEs performance.

H1: Establishing and implementing of ISO 9001 QMS has a positive effect on SMEs performance.

According to result obtained from table 5 and figure 2, 3 for testing main objective, all of parameter consisting of RMSEA in which less than 0.05, GFI that should be in the range 0.9 - 0.95, AGFI that acceptable range for it is between 0.9-1, The ratio of chi-square to degree of freedom, in view of the acceptable range for this parameter $0 \leq \chi^2/df \leq 2$ indicate good fit and with value $2 \leq \chi^2/df \leq 3$ indicating acceptable fit, t-value in which should be more than 2 all of result in acceptable range so, the assumption H1 is acceptable.

Table 5. *Hypothesize Test of Main Objective.*

Model	Hypothesizes	RMSE	GFI	AGFI	Z	T	χ2 : df	RESULT
1	ISO9001:FP	0.041	0.93	0.91	0.19	3.74	2.37	Accepted
2	ISO9001: LP	0.033	0.92	0.90	0.40	8.36	2.37	Accepted
3	ISO9001: IP	0.053	0.94	0.92	0.25	5.36	2.37	Accepted
4	ISO9001: CP	0.043	0.95	0.93	0.16	3.72	2.37	Accepted

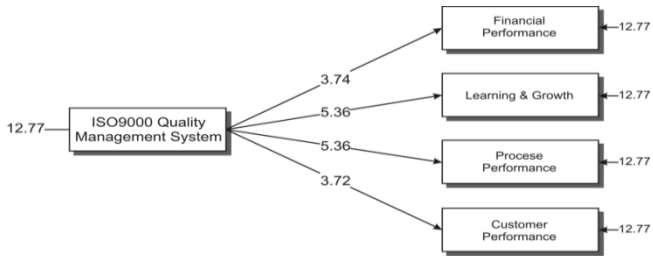

Figure 2. *Structural Equation Modeling (t-value).*

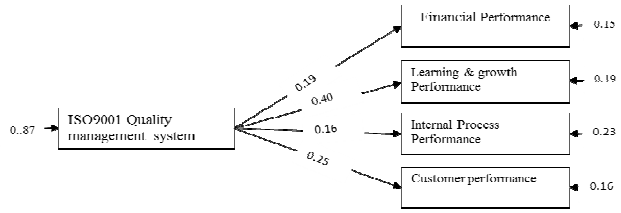

Figure 3. *Structural Equation Modeling (z-value).*

14.3. Correlation Coefficient

For investigating the correlation between dependent and independent variable Spearman rank correlation coefficient has been used and the result of study has been shown is in table 6. For evaluating the Spearman rank correlation coefficient, the range should be located between +1 and –1. If the figure is positive, there is a correlation among variables and vice versa.

Table 6. *Spearman Rank Correlation Coefficient.*

	QMS1S09001	FP	LG	IP	CP
QMS1S09001	1				
FP	0.162	1			
LG	0.175	0.675	1		
IP	0.121	0.674	0.648	1	
CP	0.480	0.220	0.310	0.574	1

As shown in table 6 all of the result is positive; therefore, there is a correlation between variables. The correlation between QMS ISO9001 and financial perspective is 0.162, learning and growth is 0.175, internal process is 0.121 and customer is 0.48. Totally, all figures are positive and show a positive correlation between effectiveness of QMSISO 9001 on the performance of SMEs enterprise.

15. Statistical Findings

Based on the finding on SMEs performance after establishing and implementing of ISO 9001 by means of balance scorecard model in the suppliers of second Iranian automaker company in Tehran province, the respondents managed to reveal tremendous information to understand and evaluate the opinion and their ideas. According to the feedback from 500 respondents, in regard to the general findings of them, firstly reliability and validity of questionnaire examined. Cronbach's alpha for the questionnaire is 0.904 and fall more than 0.89; therefore, the reliability of this questionnaire is excellent and is generally considered to be acceptable. According to the validity of questionnaire that it evaluated by factor analysis, t-value is one of the important factor is more than 2 and acceptable. For question number 1 to 18 validity test consist of some factors that are RMSEA= 0.038, GFI= 0.95, AGFI= 0.92 and (χ^2/DF) = 1.16, so the result indicating a good model fit. For the remaining questions that figures are (χ^2/DF) = 0.51, RMSE =0. 048, GFI = 0.93, AGFI =0. 90, so, the result indicating a good model fit and validity of the questionnaire is acceptable.

Structural Equation Modeling (SEM) by means of Lisrel 8.52 software has been used for evaluating of causative relation in hypothesizes conceptual framework of this study. First of all, 4 secondary objectives were evaluated, based on the obtained results in which parameters including (χ^2/DF), RMSE, GFI, AGFI and t-value in table number 1 to 6 all factors are located in an acceptable range. So the establishing and implementing of ISO 9001 could have positive effects on performance of SMEs in four perspectives namely financial, customer, internal process and learning and growth according to the balance scorecard model. Furthermore, the main objective depends on the acceptance of 4 secondary objectives, so based on result of

secondary objectives according to the above mentioned explanation. The main objective is that to examine the effects of ISO 9001in small and medium enterprises is acceptable. Spearman's rank correlation coefficient has been used for investigating dependent and independent variable. As shown in table 6 all of the result is positive; therefore, there is a correlation between variables. The correlation between QMS ISO9001 and financial perspective is 0.162, learning and growth is 0.175, internal process is 0.121 and customer is 0.48. Totally, all figures are positive and show a positive correlation between effectiveness of QMSISO 9001 on the performance of SMEs enterprise.

16. Recommendation

ISO 9001 certification does not guarantee organization performance in itself. But the managers shall have a strategic view to the standard. They should deploy the principles and requirements of this standard when developing their organization's strategy and before doing anything they should answer to these questions properly:

- Do you have a sufficient knowledge about IS09001 QMS? Are you sure that this standard can be a right solution for better managing of your organization?
- Have you determined a documented corporate finance strategy?
- Have you determined a system for appraising of company performance?
- Have you identified the key performance indicators of your organization?
- Due to limitation of resources, have you determined a documented procedure for identifying and employing of external resource?

The proper response to these questions will be determined the path and road map for establishing and implementing ISO 9001 QMS.

In order to maintain and develop the quality management system after certification, we suggest some recommendation as below;

- Align the organization management system with principle and requirement the quality management system, and avoid from application of parallel systems.
- Determine an effective system for communicating with your employees especially people whose activities effect on the key process of organization?
- Set in a systematic and targeted approach to internal audit.
- Identify opportunities for improvement from results of audits.
- Appoint Management Representative among the board members.
- Support the internal audit team continuously.
- Effectively involve employee for maintaining the quality management system.

17. Conclusion

The main objective of the study was to discuss the effect of applying Quality ISO9001 QMS by using of balanced scorecard model on performance suppliers in the second Iranian Automaker Company namely SAIPA. As it is shown in figure 2 and 3 and table 6, the Quality Management System ISO9001 has positive effects on four perspectives, which form performance of a company, including financial, internal processes, customer and learning and growth. It means that, the better system performs and the amount of commitment of managers and employees needs to be more. Better companies will achieve their goals and objectives in all perspectives including financial, internal process, customer and learning and growth. In short the performance of the companies will be improved. These findings mean that ISO9001 QMS could help the company's perpetuity, mobility and growth as well. Thus, this dissertation by discusses the effects of applying of ISO9001 on companies' performance. Therefore it can guide the companies' managers to set strategy and make wise decisions.

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