International Journal of Business, Human and Social Sciences
ISSN: 2517-9411
Vol:11, No:7, 2017

# An Evaluation of ISO 9001:2008 and ISO 9001:2015 Standard Changes in Quality Management System

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***Abstract*—**The objective of this study provides an insight into enterprises, who need to carry on their sustainability in harmony with the changing competition conditions, technology and laws, regarding the ISO 9001:2015. In the study, ISO 9001:2015, which is planned to be put in force and exists as a draft, was studied and its differences from the previous standard, ISO 9001:2008, were determined. To find out the differences, a survey was conducted among enterprises that implement a quality system. According to the findings obtained at the end of the study, it was observed that the enterprises attach importance to quality and follow the developments about quality management system, and they find the changes in the new draft document necessary.

***Keywords*—**ISO 9001, quality, quality management system, quality revision.

## I. Introduction

QUALITY is the entire characteristics of the goods and services offered to the customer based on the capability of those goods and services to meet the existing or potential needs of the customer [1]. Improvement and betterment of quality has become an important mission for businesses, and the concept "Quality Management System" has been suggested for the effective practice, follow-up and sustainability of quality in businesses. Quality management system is not a simple cluster of procedures; it is rather an integrated system influenced by the economic, sectorial and industrialization levels of the country beyond the businesses [2]. In 1947, ISO "International Organization for Standardization" was established in Switzerland to effectively practice the quality management system in businesses efficiently and publish international quality standards. ISO 9000 is a family of standards related to quality management developed by the International Organization for Standardization [3]. The assurance and standardization of quality by ISO 9000 has made the businesses gain a continuous improvement and discipline mechanism. In a business that holds ISO 9001 certificate, each problem is regarded as an opportunity for betterment, and to avoid the repetition of that problem, and it is aimed to find the original reason for prevention of problems and to remove them. The general objective of ISO 9000 is ensured sustainability of the business with the implementation the Total Quality Management philosophy. Having internalized continuous betterment philosophy, ISO revises the established standards every few years due to technological developments, present competition conditions and changing implementer and customer needs.

When we look at the academic studies conducted on this topic; we can see that Altunbag performed a study examining the effects of ISO 9000 standards and Total Quality Management on international marketing. The study, which included 36 companies in the Central Anatolia region, divided the involved companies into two groups as those who hold an ISO 9000 certificate and those who do not, and researched into the reasons of holding and not holding the certificate. Within this framework, the perspectives of businesses with regard to ISO 9000 were studied according to its influence on international marketing. The rate of furniture factories that took part in the survey in this study was 30.5. At the end of the study, it was concluded that the businesses holding the ISO certificate were more influential in international markets [4]. In another study conducted by Buluç, the structure and implementation stages of the quality management system and what the system offers to businesses are explained. In the study, the registrations foreseen by the system and documents explaining the system were prepared and a sample implementation was presented. The problems confronted during the implementation were discussed and solution suggestions were made. The objective of the study was to explain the standard according to its final form after the 2008 revision, and to demonstrate the steps to be taken by the businesses for certification. Within this scope, the implementation and documentation structure regarding the standard in a furniture company was explained, and its contributions to the company were given. At the end of the study, it was concluded that the furniture company was 100% ideal to implement the system by taking the planned and actualized data into consideration. The rate of the actualization of strategical decisions was found to be 52% [5]. In another study performed by Hernad and Gaya, ISO 9001:2008 Quality Management System was evaluated in terms of documentation management system, and the innovations about document management with the new standard were discussed in six steps [6]. In the study by Möroydor, the integrated establishment of ISO 9000 and HACCP (Hazard Analysis and Critical Control Points) systems and the benefits they offer to businesses were researched. 8 businesses that were included in the study stated that the Quality Management System met their expectations 100% [7]. Wiele et al. pointed out that as ISO 9000 standards

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were more practical, clearer and simpler than Total Quality Management, and therefore many enterprises are implementing ISO 9000 Quality Management Standard [8]. In the structure they developed, Najmi and Kehoe claimed that once the ISO 9000 certificate was achieved, a Total Quality Management strategy was formed and implemented in businesses. Within this context, they suggest that ISO 9000 certificate is a significant starting point for Total Quality Management practices [9].

In their study, Martinez-Costa and Martinez-Lorento suggested that the Total Quality Management philosophy was in contradiction with some of the ISO 9000 standards that companies holding the ISO 9001:2000 certificate are more similar to Total Quality Management philosophy than the certificate issued earlier [10].

In the research performed by Semercioz et al., manufacturing facilities that obtained the ISO 9001-9002 certificate in Turkey between 1996 and 1999 and that were active in ten different sectors were examined in terms of organizational changes and new quality management practices in the 5-year period. The data obtained through survey forms were analyzed using SPSS package program. At the end of the analysis, it was observed that organizational changes occurred and a medium-level change took place in terms of information technologies, organizational structure and team work in those facilities in the 5-year period [11].

In Oztuna's study, the objective was to measure the business life quality and to determine the factors that affect business life in companies holding ISO 9001:2000 Quality Management System. The data were obtained through face-to-face survey method within working hours. The data obtained were analyzed using SPSS package program. At the end of the study, it was concluded that in companies that have the ISO 9001:2000 standard, there was a relationship between the employees' feeling of safety and their satisfaction with respect to the health and safety measures at the workplace. It was also found out that there was no relationship between the increase in the motivation of the employees and the satisfaction with respect to the time spent at the workplace [12].

A survey was conducted by Gundoğdu among 30 businesses holding the older version TS ISO 9000:1994 standard in different sectors in the Aegean Region in Denizli, Aydın and Muğla. It was concluded that in the businesses in question, benefits were provided in terms of inside communication, records and accountability, storage and transportation processes, implementation of a system in the business, communication with the customers, and establishing prestige in the market [13].

Chittenden et al in their study prepared e comprehensive questionnaire about ISO 9000 and investigated the characteristics of the SMEs that hold the certificate in the UK and investigated about the reason for not receive the certification from SMEs that do not hold the certificate. As a result of the study, it was determined that they did not apply the standard. Because SMEs that do not hold the certificate, do not want to bear the cost of holding this certificate [14]. Also, there are many studies in this area [15]-[17].

In this study, the draft document ISO 9001:2015 regarding the standards prepared for Quality Management System was studied with the objective to determine the differences between the above-mentioned draft document and the previous one, ISO 9001:2008. To this end, a survey form was prepared and the businesses' approaches to quality were evaluated.

## II. Material and Methods

### *A. Data Collection and Study Population*

In this study, ISO 9001:2015, the draft document of which was published on June 3, 2013, and ISO 9001:2008, which was still in force in June 2014, were compared and the differences were found. Then, the advantages and disadvantages of those differences for the businesses were determined and explained. A survey using 5 point Likert scale was prepared on the differences and factors that were determined. The survey was sent out to private and public enterprises that were selected through random sampling method and an analysis was performed on the obtained data. The survey was prepared based on TUIK (TSI – Turkey Statistical Institute) and KOSGEB (Republic of Turkey Small and Medium Enterprises Development Organization) data, dissertations made on this topic previously and ISO's recent studies regarding the revision. The research covered senior management staff including executive officers, chiefs and managers working in private and public enterprises in Turkey between March and May of 2014. A total of 97 enterprises as 3 public enterprises, 87 private enterprises and 7 foreign capital enterprises participated in the study. Within this scope, 6 questions were asked about the demographic information of the enterprises. The perceptions of the participants about quality management system and ISO 9001:2015 were obtained through 23 questions. There was also an open-ended question where the participants could state their opinions and recommendations.

The survey consisted of 5 parts in general. In the first part, there were questions about the enterprise; in the second part, there were questions about the structure of the enterprise; in the third part, there were questions about quality perception; in the fourth part, there were questions about the implementation of ISO 9001 quality management system standard in enterprises; and in the fifth part, there were questions about ISO 9001-2015 draft quality management system standards revision.

The data obtained at the end of the study were analyzed using IBM SPSS Statistics package program and descriptive statistics and inductive statistics methods. With the survey, it was ensured that the enterprises were informed about the changes regarding the Quality Management System, and the opinions of enterprises on this revision and their points of view about the changes made were found out.

### *B. Data Analysis*

Statistical methods were used in this study. As the data obtained did not have a regular distribution, once the descriptive statistics were examined, mean comparisons were made using non-parametric methods. In the analysis of the data, Mann Whitney U test, Kruskal – Wallis Test and chi-square test

were used. Mann Whitney U test is a method used for two independent groups that do not have a parametric regular distribution. In the U test, the data should consist of two independent samples and the samples would be independent from each other [18]. In the Kruskal-Wallis test, the basic aim is to measure the common effects of the independent variables on the dependent variable [18].

Chi-square test is the most common test used in the comparison of two independent group rates. Chi-square tests that calculate the relationship between measured variables such as nominal and ordinal levels of measurement, and the suitability of these variables to theoretical distributions, have been used in many different fields [18].

## III. Results

The reliability and validity of the survey questions were ensured using reliability and factor analysis. At the end of the factor analysis, it was observed that the survey questions were divided into three factors. These are quality perception measurement factor, quality management system perception measurement factor and measurement factor regarding the perception of the ISO 9001:2015 revision changes. At the end of the reliability analysis, the general result was found to be 0,963, and the Cronbach alpha coefficients (α) regarding the other sub-factors were found to be 0,890; 0,960 and 0,923, respectively.

The demographic and descriptive statistical information on the 97 enterprises who took part in the survey is given in Tables I and II.

In Table III, the number of employees and the evaluation of the scales according to the status of exports are given.

TABLE I
Demographic Information on Enterprises

| Variable | Sub-Group Variable | N (%) | Mod | Med. |
|---|---|---|---|---|
| **Status of being the quality unit or person in charge of quality** | Yes (1) | 74 (76,3) | 1 | |
| | No (2) | 23 (23,7) | | |
| | **Total** | **97 (100,0)** | | |
| **Enterprise Status** | Public Enterprise (1) | 3 (3,1) | 2 | |
| | Private Enterprise (2) | 87 (89,7) | | |
| | Public & Private Enterprises (3) | - | | |
| | Foreign Capital Enterprises (4) | 7 (7,2) | | |
| | **Total** | **97 (100,0)** | | |
| **Number of Employees** | 0 – 9 (1) | 19 (19,6) | | 3 |
| | 10 - 49 (2) | 14 (14,4) | | |
| | 50 - 249 (3) | 31(30,9) | | |
| | 250 – 499 (4) | 8 (8,2) | | |
| | 500 – 999 (5) | 10 (10,3) | | |
| | 1000 and over (6) | 15 (15,5) | | |
| | **Total** | **97 (100,0)** | | |
| **Status of Having ISO Certificate** | Yes (1) | 66 (68,0) | 1 | |
| | No (2) | 31(32,0) | | |
| | **Total** | **97 (100,0)** | | |
| **Status of Receiving Consultancy Service** | Yes (1) | 51(52,6) | 1 | |
| | No (2) | 46 (45,4) | | |
| | **Total** | **97 (100,0)** | | |

TABLE II
Demographic and Descriptive Statistical Information on the Structure of Private, Public, and Private and Foreign Capital Companies

| Variable | Sub-Group Variable | N (%) | Mod | Med. |
|---|---|---|---|---|
| Type of Enterprise | Corporation (1) | 59 (62,8) | 1 | |
| | Limited Company (2) | 33 (35,1) | | |
| | Commandite Company (3) | 2 (2,1) | | |
| | Collective Company (4) | - | | |
| | **Total** | **94 (100,0)** | | |
| Annual Turnover | Less than 50 million TL (1) | 39 (41,5) | | 2 |
| | 50 million – 500 million TL (2) | 23 (24,5) | | |
| | 500 million - 1 billion TL (3) | 9 (9,6) | | |
| | 1 billion - 5 billion TL (4) | 11 (11,7) | | |
| | 5 billion - 10 billion TL (5) | 1 (1,1) | | |
| | More than10 billion TL (6) | 11 (11,7) | | |
| | **Total** | **94 (100,0** | | |
| Status of Export | Yes (1) | 41(43,6) | 2 | |
| | No (2) | 53 (56,4) | | |
| | **Total** | **94 (100,0)** | | |

TABLE III
Number of Employees and the Evaluation of Scales per the Status of Exports

| **Variables** | | | | |
|---|---|---|---|---|
| Number of Employees | Status of Exports | **Quality Perception (Mean.± S.D.)** | **ISO 9001 Quality Management System Perception (Mean.±S.D.)** | **ISO 9001:2015 Draft Revision Changes Perception (Mean±S.D.)** |
| 0 – 9 | Yes | 2,33 ± 0,00 | 1,00 ± 0,00 | 1,00 ± 0,00 |
| | No | 3,93 ± 0,45 | 3,76 ± 0,28 | 3,46 ± 0,26 |
| 10 – 49 | Yes | 4,00 ± 0,33 | 3,70 ± 0,70 | 3,67 ± 0,25 |
| | No | 3,79 ± 0,83 | 3,75 ± 1,00 | 3,54 ± 0,95 |
| 50 – 249 | Yes | 4,26 ± 0,87 | 3,99 ± 0,99 | 3,71 ± 0,93 |
| | No | 4,46 ± 0,47 | 4,09 ± 0,48 | 3,72 ± 0,37 |
| 250 – 499 | Yes | 4,53 ± 0,73 | 3,92 ± 0,79 | 3,66 ± 0,59 |
| | No | 4,67 ± 0,47 | 4,05 ± 0,35 | 4,10 ± 0,28 |
| 500 – 999 | Yes | 4,20 ± 1,12 | 3,78 ± 1,09 | 3,82 ± 0,50 |
| | No | 4,27 ± 1,12 | 4,20 ± 0,41 | 3,80 ± 0,45 |
| 1000 and over | Yes | 4,62 ± 0,52 | 4,24 ± 0,44 | 3,98 ± 0,61 |
| | No | 4,00 ± 0,00 | 3,90 ± 0,00 | 3,44 ± 0,00 |

According to Table III,

- While quality perception is at the lowest level in companies with 0-9 employees and performing export activities (2,33), it is at the highest level in companies with 1000 and over employees and performing export activities (4,62).
- While ISO 9001 Quality Management System perception is at the lowest level in companies with 0-9 employees and performing export activities (1,00), it is at the highest level in companies with 1000 and over employees and performing export activities (4,24).
- While ISO 9001:2015 Draft Revision Changes perception is at the lowest level in companies with 0-9 employees and performing export activities (1,00), it is at the highest level in companies with 1000 and over employees and performing export activities (4,10).

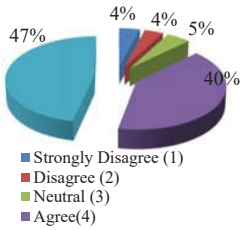
### *A. Results of the Research Questions about Quality Perception*

In Table IV, the results about the general evaluation of the

questions about quality perception are given. According to Table IV, 4,1% of the participants answered the questions about quality as "Strongly Disagree", 3,8% as "Disagree", 4,8% as "Neutral", 0,5% as "Agree" and 46,7% as "Strongly Agree". In other words, the enterprises who took part in the study indicated that they attach importance to quality by answering the questions in this part generally as "Agree" or "Strongly Agree". The enterprises believe that quality is not an action practiced just because of some legal obligation.

TABLE IV
GENERAL EVALUATION RESULT ABOUT QUALITY PERCEPTION SCALE

| GENERAL | |
|---|---|
| | **N (%)** |
| Strongly Disagree (1) | 12 (4,1) |
| Disagree (2) | 11 (3,8) |
| Neutral (3) | 14 (4,8) |
| Agree (4) | 118 (40,5) |
| Strongly Agree (5) | 136 (46,7) |
| **Total** | **291 (100,0)** |
| **Mean ± Std. Dev.** | **4,22± 0,74** |




*B. Result of the Research Questions about ISO 9001 Quality Management Standard Practices*

In Table V, a general evaluation of the questions about Quality Management System perception is given. According to Table V, 3,8% of the participants answered the questions about Quality Management System as "Strongly Disagree", 3,0% as "Disagree", 14,0% as "Neutral", 54,7% as "Agree" and 24,4% as "Strongly Agree". In other words, the enterprises who took part in the study answered the questions in this part generally as "Neutral" or "Agree". The enterprises find the Quality Management System Standards necessary, and believe that improvement can be obtained by using the standards in production and management systems effectively.

*C. Result of the Research Questions about ISO 900:2015 Draft1 Quality Management Standards Revision*

In Table VI, a general evaluation of the questions about ISO 9001:2015 Quality Management System Draft revision perception is given. According to Table VI, 4,2% of the participants answered the questions as "Strongly Disagree", 8,0% as "Disagree", 23,3% as "Neutral", 47,8% as "Agree" and 16,6% as "Strongly Agree". In other words, the enterprises who took part in the study answered the questions in this part generally as "Neutral" or "Agree". The enterprises find the Quality Management System Standards revision necessary, and believe the changes made are appropriate.

In this study, the points of views and perceptions of enterprises about Quality, Quality Management System and ISO 9001:2015 revision were evaluated. Whether these scales differed per the demographic characteristics of the participants, whether there was a relationship among the demographic characteristics and which demographic information explained which criterion to what extent were researched into, and the answers to the following questions were sought.

TABLE V
GENERAL EVALUATION RESULT ABOUT QUALITY MANAGEMENT SYSTEM PERCEPTION SCALE

| GENERAL | |
|---|---|
| | **N (%)** |
| Strongly Disagree (1) | 37 (3,8) |
| Disagree (2) | 29 (3,0) |
| Neutral (3) | 136 (14,0) |
| Agree (4) | 531 (54,7) |
| Strongly Agree (5) | 237 (24,4) |
| **Total** | **960 (100,0)** |
| **Mean ± Std. Dev.** | **3,93± 0,74** |

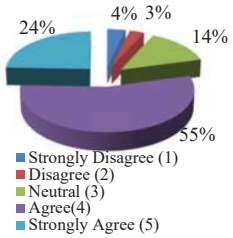
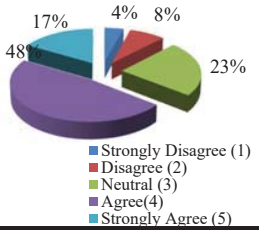



TABLE VI
GENERAL EVALUATION RESULT ABOUT ISO 9001:2015 QUALITY MANAGEMENT SYSTEM DRAFT REVISION PERCEPTION SCALE

| GENERAL | |
|---|---|
| | **N (%)** |
| Strongly Disagree | 41 (4,2) |
| Disagree (2) | 78 (8,0) |
| Neutral (3) | 226 (23,3) |
| Agree (4) | 464 (47,8) |
| Strongly Agree (5) | 161 (16,6) |
| **Total** | **970** |
| **Mean ± Std. Dev.** | **3,64± 0,68** |




The acceptance/rejection status of the hypotheses determined by comparing with demographic information and scales is shown in Table VII.

In Table VIII, the chi-square table where the relationships among the demographic information are sought is given.

Fig. 1 demonstrates the comparison of the mean scales of the enterprises and Table IX includes an evaluation of the mean values and the standard deviations of the enterprises who hold and do not hold the ISO 9001 Quality Management System Certificate in terms of the scales.

According to Table IX;

- Mean quality perception is higher in enterprises that hold a quality certificate. However, the difference is very little (mean difference: 0,3).
- The mean ISO 9001 Quality Management System perception is higher in enterprises that hold a quality certificate. However, the difference is very low (mean difference: 0,34)
- Mean ISO 9001:2015 Draft Revision Changes perception is higher in enterprises that hold a quality certificate. However, the difference is very low (mean difference: 0,28)

In Fig. 2, the distribution graphics of the points of view of enterprises that hold and do not hold ISO 9001 Quality Management System Certificate with regard to quality perception are given.

As seen in Fig. 2, while the non-certified enterprises answered the questions mostly as "Agree", the certified enterprises answered most of the questions as "Strongly Agree".

In Fig. 3, the distribution graphics of the points of view of ISO 9001 Quality Management System of enterprises that hold

and do not hold ISO 9001 Quality Management System Certificate are given. As seen in Fig. 3, both the certified and non-certified enterprises answered most questions as "Agree". However, while many of the answers in non-certified enterprises were closer to "Neutral", many of the answers in certified institutions were closer to "Strongly Agree".

TABLE VII
HYPOTHESES AND STATUS OF ACCEPTANCE/REJECTION OF THE HYPOTHESES

| FACTOR | METHOD | | HYPOTHESIS | p | A/R |
|---|---|---|---|---|---|
| The Factor of Measuring the Perception of Quality | MW - U | $H_1$ | There is a significant difference between whether the enterprise has a person or unit in charge of quality and the level of perception of quality. | 0,003 | A |
| | KW | $H_2$ | There is a significant difference between the operational status of the enterprise and the level of perception of quality. | 0,284 | R |
| | KW | $H_3$ | There is a significant difference between the number of employees of the enterprise and the level of perception of quality. | 0,001 | A |
| | MW –U | $H_4$ | There is a significant difference between whether the enterprise is ISO certified and the level of perception of quality. | 0,005 | A |
| | MW - U | $H_5$ | There is a significant difference between whether the enterprise receives consultancy services and the level of perception of quality. | 0,100 | R |
| | KW | $H_6$ | There is a significant difference between the location of the enterprise and the level of perception of quality. | 0,288 | R |
| | KW | $H_7$ | There is a significant difference between the sector that the enterprise is active in and the level of perception of quality. | 0,288 | R |
| | KW | $H_8$ | In private, public & private and foreign capital companies, there is a significant difference between the type of company and the level of perception of quality. | 0,056 | R |
| | KW | $H_9$ | In private, public & private and foreign capital companies, there is a significant difference between the annual turnover of the enterprise and the level of perception of quality. | 0,237 | R |
| | MW - U | $H_{10}$ | In private, public & private and foreign capital companies, there is a significant difference between the status of export of the enterprise and the level of perception of quality. | 0,051 | R |
| The Factor of Measuring the Perception of Quality Management System | MW - U | $H_{11}$ | There is a significant difference between whether the enterprise has a person or unit in charge of quality and the perception of quality management system. | 0,000 | A |
| | KW | $H_{12}$ | There is a significant difference between the operational status of the enterprise and the perception of quality management system. | 0,864 | R |
| | KW | $H_{13}$ | There is a significant difference between the number of employees of the enterprise and the perception of quality management system. | 0,005 | A |
| | MW –U | $H_{14}$ | There is a significant difference between whether the enterprise is ISO certified and the perception of quality management system. | 0,000 | A |
| | MW - U | $H_{15}$ | There is a significant difference between whether the enterprise receives consultancy services and the perception of quality management system. | 0,014 | A |
| | KW | $H_{16}$ | There is a significant difference between the location of the enterprise and the perception of quality management system. | 0,103 | R |
| | KW | $H_{17}$ | There is a significant difference between the sector that the enterprise is active in and the perception of quality management system. | 0,030 | A |
| | KW | $H_{18}$ | In private, public & private and foreign capital companies, there is a significant difference between the type of company and the perception of quality management system. | 0,202 | R |
| | KW | $H_{19}$ | In private, public & private and foreign capital companies, there is a significant difference between the annual turnover of the enterprise and the perception of quality management system. | 0,060 | R |
| | MW - U | $H_{20}$ | In private, public & private and foreign capital companies, there is a significant difference between the status of export of the enterprise and the perception of quality management system. | 0,142 | R |
| The Factor of Measuring the Perception of ISO 9001:2015 Revision Changes | MW - U | $H_{21}$ | There is a significant difference between whether the enterprise has a person or unit in charge of quality and the perception of ISO 9001:2015 revision changes. | 0,000 | A |
| | KW | $H_{22}$ | There is a significant difference between the operational status of the enterprise and the perception of ISO 9001:2015 revision changes. | 0,086 | R |
| | KW | $H_{23}$ | There is a significant difference between the number of employees of the enterprise and the perception of ISO 9001:2015 revision changes. | 0,066 | R |
| | MW –U | $H_{24}$ | There is a significant difference between whether the enterprise is ISO certified and the perception of ISO 9001:2015 revision changes. | 0,005 | A |
| | MW - U | $H_{25}$ | There is a significant difference between whether the enterprise receives consultancy services and the perception of ISO 9001:2015 revision changes. | 0,153 | R |
| | KW | $H_{26}$ | There is a significant difference between the location of the enterprise and the perception of ISO 9001:2015 revision changes. | 0,292 | R |
| | KW | $H_{27}$ | There is a significant difference between the sector that the enterprise is active in and the perception of ISO 9001:2015 revision changes. | 0,164 | R |
| | KW | $H_{28}$ | In private, public & private and foreign capital companies, there is a significant difference between the type of company and the perception of ISO 9001:2015 revision changes. | 0,300 | R |
| | KW | $H_{29}$ | In private, public & private and foreign capital companies, there is a significant difference between the annual turnover of the enterprise and the perception of ISO 9001:2015 revision changes. | 0,074 | R |
| | MW - U | $H_{30}$ | In private, public & private and foreign capital companies, there is a significant difference between the status of export of the enterprise and the perception of ISO 9001:2015 revision changes. | 0,105 | R |

Bold numbers represent statistically significant p values (P<0,005); KW: Kruskal –Wallis Test MW – U: Mann Whitney U Test; A/R: Acceptance/Rejection

TABLE VIII
CHI-SQUARE TABLE WHERE THE RELATIONSHIP AMONG THE DEMOGRAPHIC INFORMATION ARE SOUGHT

| | Hypothesis | Degree of Relationship | p | A/R |
|---|---|---|---|---|
| **H31** | There is a significant relationship between whether the enterprise has a person or unit in charge of quality and the sector it is active in. | medium (0,61) | 0,016 | **a** |
| **H32** | There is a significant relationship between whether the enterprise has a person or unit in charge of quality and the number of employees. | strong (0,72) | 0,000 | **a** |
| **H33** | There is a significant relationship between whether the enterprise has a person or unit in charge of quality and the city it is located in. | medium (0,52) | 0,150 | r |
| **H34** | In private, public & private and foreign capital companies, there is a significant relationship between whether the enterprise has a person or unit in charge of quality and its annual turnover. | medium (0,52) | 0,000 | **a** |

Bold numbers represent statistically significant p values (p<0,05); A/R: Acceptance/Rejection

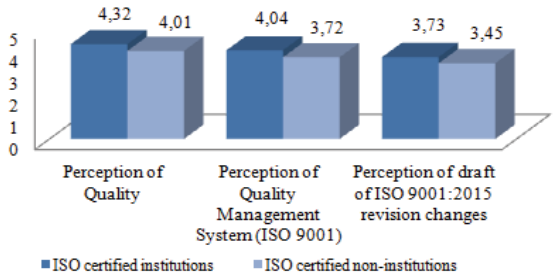



Fig. 1 The comparison of the Mean Scales of Enterprises Who Hold and Do Not Hold ISO 9001 Quality Management System Certificate

TABLE IX
CHI-SQUARE TABLE WHERE THE RELATIONSHIPS AMONG THE DEMOGRAPHIC INFORMATION ARE SOUGHT

| | Quality Perception (Mean. ± S.D.) | ISO 9001 Quality Management System Perception (Mean. ± S.D.) | ISO 9001:2015 Draft Revision Changes Perception (Mean. ± S.D.) |
|---|---|---|---|
| Enterprises who hold ISO certificate | 4,01 ± 0,58 | 3,70 ± 0,63 | 3,45 ± 0,64 |
| Enterprises who do not hold ISO certificate | 4,32 ± 0,79 | 4,04 ± 0,77 | 3,73 ± 0,68 |

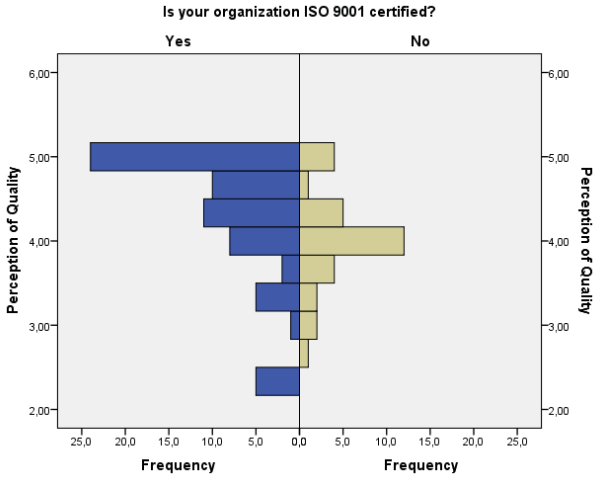



Fig. 2 The distribution graphics of the points of view of enterprises that hold and do not hold ISO 9001 Quality Management System Certificate with regard to quality perception

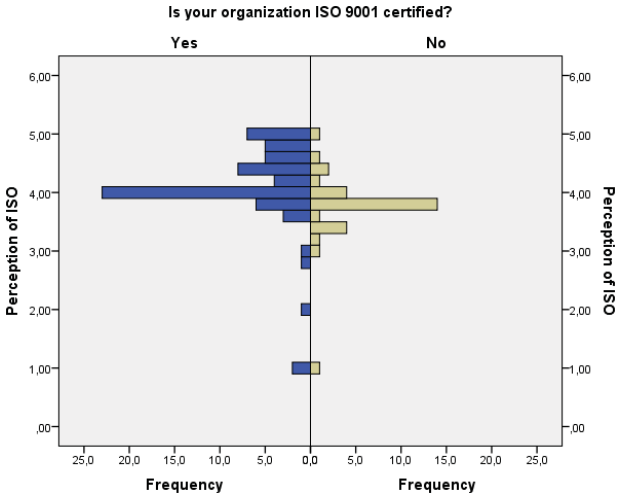



Fig. 3 The distribution graphics of the points of view of ISO 9001 Quality Management System of enterprises that hold and do not hold ISO 9001 Quality Management System Certificate

In Fig. 4, the distribution graphics of the points of view of enterprises that hold and do not hold ISO 9001 Quality Management System Certificate with regard to ISO 9001:2015 draft revision changes are given.

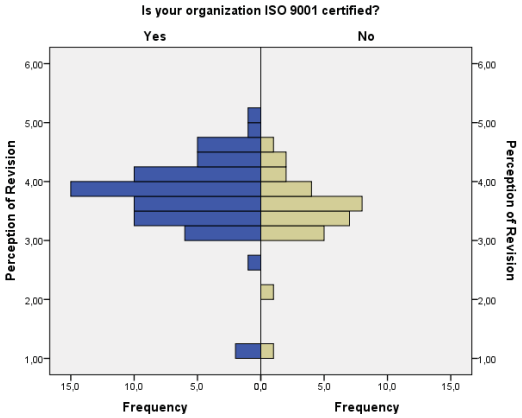



Fig. 4 The distribution graphics of the points of view of enterprises that hold and do not hold ISO 9001 Quality Management System Certificate with regard to ISO 9001:2015 draft revision changes

As seen in Fig. 4, both the certified and non-certified enterprises answered most questions as “Agree”.

## IV. Conclusion

In the study, ISO 9001-2015 that was prepared as a draft was examined, and its differences from the previous standard, ISO 9001:2008, were determined. In order to set forth the differences, enterprises implementing the quality system were surveyed. With the survey, enterprises' perceptions of quality, existing Quality Management System and the draft document to be published were evaluated. In conclusion, it was observed that the enterprises in Turkey follow the developments about Quality Management System, and believe that the ISO 9001-2015 standard draft revision is needed. The results may imply that the existence of people or units in charge of quality in enterprises has increased the level of knowledge about quality, present quality management system and the draft document to be published. It was found out that the level of perception of quality differ according to the scale of the enterprises; however, the perception of quality management system does not change. That the enterprise is ISO certified indicates that the perception of quality has increased. However, even enterprises that are not ISO certified are aware of the Quality Management System and believe that such awareness will have positive contributions to enterprises and a revision is necessary.

It is seen that in the new revision of ISO 9001:2008, the change will mainly prevent conflicts in concepts. Questions about whether it is directed towards to those who work in service sector will be clarified with the new draft to be published. However, while some enterprises that took part in the survey attach importance to Quality Management System and seems it necessary, they do not hold any quality certificates. As having to bear very serious financial obligations can be listed among the reasons for such a case, a price policy that addresses to all enterprises regardless of their scale can be determined. And thus, it may be ensured that enterprises that give importance to quality will meet the required conditions and increase the quality of their goods or services. About the certification process, while some employees understand the importance and point of the study, some others find this unnecessary. In order to eliminate such perception, forums that are open to all employees can be organized in enterprises at least once a year or bulletins that are accessible by everyone can be prepared and thus, developments can be followed by all the employees. If the standards address the enterprises at all scales and in all sectors, a contribution to the improvement of quality awareness in the world might be possible.

## Acknowledgement

The authors would like to thank Karabuk University for their funding of this Scientific Research Project.

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