

Information and Records Management Precondition for a suitable quality management system

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ABSTRACT

This study aimed to identify the factors and motivations that influence the quality management system certification. These factors, motives and interests were compared between organizations that received ISO9001 certificate in 2002 and organizations that received it in 2012. In 2012, 21 companies in Isfahan province have received ISO9001 Certificates. Questionnaire was prepared and completed by the quality management of the companies. 72 percent responses were received out of the questionnaire. Three factors of documentation control, documentation, work define, ability to record and documentation in general are the important factors that majority of organizations on these bases obtained ISO9001 certificate. All the three factors are related to the management of records. Organizations surveyed have been weak in the field of documents control and record keeping. Moreover, the recessions in internal audit, quality policy and planning are very important to get certificate and requires more attention. In both years, customers demand was the main motivation for the organizations to get certificate. It was important to introduce a regular job. After motivating the need for a license to enter a foreign market was important. In both years, 2002 and 2012, largest net profit the organizations got for the sake of certificate were improvement in management and acceptance of responsibility. Some organizations have stated that certificate improved the customer's demand and government.

KEYWORDS: international standard, management of information registration, quality management, business process.

1. INTRODUCTION

Information management (IM) is a broad concept that has different meanings to different interpretations among different domains. The term is often used interchangeably with other terms. For example, resource information management, information technology management (IT), policies management and standard information are considered equal [1]. Some studies show that information management is based on idea of science information.[2]. On the other hand, the purpose of the record management is the process of creating a handle to all records created as a result of organizational activities, evaluating, organizing and scheduling them for access to these records. Executive activity, constitutes the main sources of the institute. They contain important information about the organization. That should not be overlooked. Records management unit and archives are essential parts of any company. These units will provide better management for people with the right to access the information and institutions and are existed to perform their obligation to provide information. Records and information management as administrative and social activities are built to define the continuity of work. Form of records and archives management units in institutions may vary according to the country's administrative structure. However, it will not change the need. So, they have universal quality. Therefore, in this study, we will continue to refer to information and records management.

2. Literature and Theoretical Research

Origin of quality management and quality movement was in United States of America and Japan, in the middle of twentieth century and pioneers were W. Edward ZEDMING, JOSEPH EMJOURAN, PHILIP BIKRAZBI, KARWAI SHYKAWA, SHIGOSHINGOY and SHIOKONDO. They all had different approach to quality management. But all aimed to increase the quality management respectively [3]. Acceptance of the quality management system in organization, will be a strategic decision making. Continuous quality products acceptance and services are the most effective tools of a factory in a successful strategy. Management standardizing and managers operations have been accepted as successful solutions in developed countries. Country wide movement to standardize management issues using the ISO 9000 standards represents a fundamental change in the field of management. Meanwhile, ISO 9000 standard as organizational change standard and to improve the status of the enterprises, is one of the important executive patterns used in the manufacturing and service organizations. So, practical commitment to comply with the provisions of these standards and creating internal beliefs and ongoing senior management in the level of the society are the first successful conditions for such standards [4]. Quality

management, mainly consists of monitoring the production. That is to separate the defective products from flawless ones. In the following, necessary work processes developed and main focus on quality control based on the statistics. Then, struggling started to ensure the quality by ensuring quality insurance. And centralization was made on quality costs, dependability of technology and omission of specifications that do not meet the standard characteristics. Important aspects of quality management system are documented work procedures and documented quality management [5].

Design and development of the organization's quality management system is affected by the different needs, Particular objectives, products variety, processes used, size and structure of the organization. At present, the main emphasis in strategic program planning to have customer is the definition of good quality. Quality management needs total commitment of the work force. Quality management is related to profit and cost and is not separated from the strategic management [6, 7]. ISO 9000 quality management system is based on 5 quality management standards and was introduced by international standard organization in 1987. The model was a British standard that mainly designed for industrial production. The following standards, later modified. And again in 1994, 2000 and 2008 were published. The further development were in some sections to adapt with standards in document management, information and records management, and use processes are used for the improvement and results measurement [8, 9, 5, 10]. Quality management standard ISO 9001 is the best known standard that has been published by international standard organization. More than one million ISO 9001 certificates were issued in 180 countries. ISO 9000 as an organizational transformation information and social status of organizations is the Key Executive Pattern, used in the manufacturing and service organizations. Therefore, practical commitment to underlying such standards and creating internal belief of first grade managers within the community are the pre success conditions of these standards [4]. The historical review of the developed countries reflects the reality that to create social growth and raise the awareness in society, standardization and monitoring the implementation of laws and regulations were a priority. The present situation of ISO 9000, one of the most common patterns of quality systems and commercial transactions is a necessary and important prerequisite [11].

2-1. Information management process

Leading experts in information management and organization, support process-oriented approach. For example, Wilson (2003) defines the information management as: use of management principles for business, organization, control, dissemination and use of information related to effective functioning of organizations of all kinds. Similarly, CHO (2002) defines the information management as the processes management of acquiring, creating, organizing, distributing and using information. Likewise, the United States accountability office (2008) defines knowledge management as the planning, budgeting, and control the manipulation of information throughout its life cycle. Information management, concept of process-oriented perspective emerged in the early 1990 [12, 13]. Proponents emphasize that a process-based management model should include all or some of the value information chain or the life style. CHO (2002) suggested six processes or activities that are associated with the information they need to manage as: (1) to identify the need information, (2) access to information they need to handle, (3) organizing and information storing, (4) design and development of products information, (5) distribution of information, (6) the use of data. WILSON (2005), verified the creation and use of information out of the data management and provided six processes related to the information: (1) business, (2) organization, (3) storage, (4) recovery, (5) access, (6) publishing all information management frameworks will not include information of identifying needs and use of information as administrative processes. However, many people believe, the most important issue facing managers are extracting the information and match it with the information required in the design and delivery of information systems to promote effective and efficient use of information [1, 14].

2-2. Documentation- information and records management

Since the first version of the standard ISO 9000, there has been an emphasis on documentation and records management. Many of these areas have been reviewed as a as a focal point in the certification process [15]. Consulting experience in the field of information and records management for 25 years has shown that those companies who want to implement a quality management system, this system should be standardized and at the same time, must introduce systematic data and document management as part of the quality management system. With refer to ISO 14489-1 standard (2001), a record created as information, received, and maintained as evidence and information that is defined by an organization or person, according to legal commitments or trading business. And also record management as a field management is responsible for the efficient and systematic control of the creation, receipt, maintenance, use and transfer of records, defined as processes to maintain and use of evidence and information of business activities and transactions in the form of documents [16]. Documents are in any form, in either electronic or paper. Proper documentation and records control are the cores of the quality management system. As it has been referred to ISO 9001 standard: created documents, in order to provide evidence of conformity to requirements and effective operation, must be controlled. A record can be an item or group of items [17]. Moreover, REED (2005), mentions about an organization whether they manage each record separately? Or has any choice, if in case management of several records managed as record of an exchange? This means that a record (in this case a document) can consist of connection to several exchanges. Organization should establish a documented procedure to define the controls needed for the identification, storage, protection, retrieval, retention and transfer of records.

Records must remain legible, identifiable and easy to recover. [5]. ISO 15489 provides insight for records management in support of quality process frame work according to ISO 9001 and ISO 14001 [18]. Different statistics from variety of sources about foreign companies show that about 60% of companies fail to implement the instant recommendations for certification along with many problems in document control center.

2-3. Thereasonsandstimuluses

Incentives are different for companies to make decisions to acquire certificate related to standard quality management ISO 9001. One Canadian study show there are five ways to implement a quality management system [19]:

1. Client demand/expectations
2. Improving quality management practices
3. Improving quality of products
4. Organizations of oriented culture or regular
5. Market advantage

A study conducted by SYGLEZ and colleagues [20] in Netherlands showed the main reason that companies want to introduce a quality management system certificate was to create a competitive advantage. One of the reasons which took place in a study by JOSEPH AND ASPIN WALL [21] in Britain and one of the reasons which took place in a study by HARAS AND Partners [22], were to succeed the needs of customers. SALEHI DEEN [23] did a research in 83 companies in Egypt. He concluded that one of the most important reasons was export efforts and marketing outside the country. A study conducted by GOTH ZAMANI AND TSYUTRY in Greece [24] was different from above studies results. This study showed that from the many reasons mentioned above, least important known reasons are customer claims and competitive advantages.

2-4. The principles of records management programs

Section 7.1 chapter seven, covers main principles standard of records management programs. Records created, been received and will be used in all economic activities. To do such organizations works, management program of comprehensive cases are needed. In such program, certain principles must be respected. The first thing to determine is which records should be created and what information they should have. Secondly, shape and structure of records created and used should be determined. And type of technology used for this purpose must be specified too. And what of metadata is required to create and to communicate with this record, must be decided. The requirements for recovery, use and transfer of records among different users and how long records should be kept to meet the needs, must be determined. In this system, records management is made easy and made records are in access, so, unauthorized access permissions should be organized. Records must be kept in a safe and secure area. But should remain until they are needed by the organization or should be kept according to the law. The risk of not being able to retrieve records in events or transactions must be valued. Avoiding danger here is that regular planning should be used, and possible measures should be taken to ensure vital records are protected and can be recovered in the event of a disaster. For example, supporting the computer software is an example of such measures, which must be created. The useful life of the records must be considered. However, variable and records must be retained as long as they are useful or required by law. The historical records are kept indefinitely. Finally, main principle of standard due to quality management should be noted. Even if an organization has a satisfactory record management program, these processes always have to be improved. Therefore, it is important to identify the opportunities for improvement and thus deal with effectiveness and efficiency of procedures [18].

2-5. Advantages and benefits

Studies conducted on the main benefits of a quality management system certification. Many of these studies are unanimous about the major benefits that include [25, 26]:

1. Customer satisfaction and customer demands better realized
2. Better image of company
3. More systematic way of working and management improvement that includes transparency and standardization of procedures and processes sets
4. Raising awareness of managers related to quality issues
5. Increasing market share and starting the competition

In a study conducted by DYSAN YAKA AND PARTNERS[27], 97% of participants believed that the main advantage of implementation of quality management system is effective management of the records. CHANG AND LU studies [25] also named effective management of records as one of the main advantages. One of the five most popular perceived benefits of ISO 9000 registration, and for the first time listed in Canadian companies, is improved documentation [19].

2-6. Thetimeandinvestment

Time and considerable investment for implementing a quality management system certificate should be spent. Studies show, the time and the required cost will be reduced over the time. Study results by KARA PETROIC[28] from the 1998, 2002, and 2006 shows time and cost to obtain certificate are reduced. It was also shown that this work for small companies in

compare with bigger ones, slightly becomes more expensive. Because to get certificate, some of the factors are considered fixed cost. And it is not associated with whether the company is big or small [9].

3. Research method

The purpose of this study is to identify factors that affect the quality management system certification. And also motivation of organizations for getting certificate and received profit out of said certificate were verified. These factors, motives and interests were compare between those organization who received ISO 9001 certificates in 2002 and other organizations that received certificates in 2012. The number of the companies who received the certificate in 2002 and could keep it in 2012 are more than companies who had certificate in 2002 and were not authorized to receive it in 2012. This growth reflects the value and importance of quality management in various companies. In 2012, 21 companies in Isfahan state received the ISO 9001 certificate. The questionnaire was prepared and was completed by the quality managements of the said companies. Responses to the questionnaire were 72%. There are three important factors in these two researches and progress of these three factors is the cause for getting this certificate. Three factors of document control, documentation, work definition, registration ability and general documentation are the important factors that majority of companies on these bases obtained the ISO 9001 certificates. All the above three factors are related to the records management.

4. Research findings

In table 1, the number of companies who had ISO certificate in 2002 and 2012, were brought their field of activities separately. The number of the companies who received the certificate in 2002 and could keep it in 2012 are more than companies who had certificate in 2002 and were not authorized to receive it in 2012. According to table 1, the number of PISCICULTURE companies who had certificate in 2002 were 2. But in 2012, it reached to 1. Number of engineering companies were 2 and reached to 4. To food companies, one is added. But in pharmaceutical companies, one is reduced. Number of certificates in transportation, communication and importing companies are increased by one. Number of certificates in education and research companies are increased by two. This growth reflects the value and importance of quality management in various companies.

Table 1.Number of companies who received ISO 9001 certificate in Isfahan province

Types of companies	The number of firms who had ISO 9001 licenses in 2002	The number of firms who had ISO 9001 licenses in 2012
PISCICULTURE	2	1
Engineering companies	2	4
Food companies	1	2
Pharmaceutical companies	4	3
Building material companies	2	2
Food packaging companies	1	1
Transport and communication companies	0	1
Import companies	2	3
Educational and research institutions	2	4
Total	15	21

In table 2, factors affecting certification ISO 9001 in organizations were shown. Based on this table, there are 3 important factors in both the searches, and the development of these three factors has caused to receive this certificate. These three factors are documents control (20% in 2002, 23/81 % in 2012) documentation and definition of work (20% in 2002 and 19/04% in 2012) and the ability to record and documentation in general case (13/31% in 2002 and 14/29% in 2012). All three above factors are related to records management.

Table 2. Factors affecting ISO 9001 certificate in organizations

Factors	Number of replies in 2002	Number of replies in 2012	Reply percentage in 2002	Reply percentage in 2012
Ability to record and documentation	2	3	13/31	14/29
Control of documents	3	5	20	23/81
Taking further disciplinary action	1	1	6/67	4/76
Documentation and defining the work	3	4	20	19/04
Procedures, rules and processes	1	2	6/67	9/53
Calibration of measuring equipment	1	1	6/67	4/76
Plan control	1	1	6/67	4/76

Education	1	1	6/67	4/76
Visit management and evaluation	1	1	6/67	4/76
Internal audit	1	2	6/67	9/53
Total	15	21	100	100

In table 3, factors that need to be addressed before any audit, are included. In previous studies, organizations were acting weak in the fields of documents control and document registration. And also records search in internal audit, quality policy and certificate planning are important and needed more attention. Issues related to the quality management system which audit officers visited them in 2012 are brought in table 4. The factors studied in this table are based on the part of the requirements for ISO 9001 certificate. The lowest average (2/45) is related to measurement section, analysis and improvement, monitoring and measurement, control of defectives product, data analysis and improvement. And this shows that most important problems, belong to this section. After that, the most important problem is related to product success, product planning, customer related processes, design and improvement. Procurement, arranging services and products. Monitoring and measurement equipment with average of 2/78. And least problematic section is related to the management responsibilities, objectives and policies of quality, commitment, responsibility, credibility, communication and visit (4/01).

MOTIVATIONS AND BENEFITS OF GETTING ISO 9001 CERTIFICATE:

There are several reasons that organizations are encouraged to take the quality management system certificate. International trade has paid great attention to the quality. Satisfaction of products and services are in priority. Those organization who were under search, have been asked about their most important motivation about getting certificate. And these matters where brought in table 5. According to this table, most important motivations of organizations were demands of customers (25 percent). And also aim was to introduce the regular work (25 percent responded in 2002 and 15 percent in 2012). After that, 16/68 percent in 2002 and 15 percent in 2012 stated that a license is required for access to foreign markets.

Table 3. Factors that need to be addressed before any audit

FACTORS	REPLIES IN 2012	PERCENTAGE OF RESPONSES IN 2012
Documents control and ability to register them	3	14/29
Registration, documentation processes	6	28/75
Calibration of measuring equipment	1	4/76
Visit management and evaluation	1	4/76
Internal audit	4	19/05
Faulty products and services check	1	4/76
Quality policy and planning for certification	3	14/29
Last audit's explanation	1	4/76
Improving projects check	1	4/76
total	21	100

Table 4. List of problems related to the quality management system in audit visits

FACTORS	AVERAGE
Quality management system, quality rules, documentation, documents control and registration	3/01
Management responsibilities, objectives and quality policy, commitment, responsibility, credibility, relevance and visit	4/11
Resource management, resource laws, human resources, infrastructure, work area	3/98
Product fulfillment, product planning, customer-related processes, plan and improvement, procurement, service and product arrangement, monitoring and measurement equipment	2/78
Measurement, analysis and improvement, monitoring and measurement, defectives control, data analysis and improvement	2/45

Table 5. Motivation of organization for receiving certificate

Motivation	Replies in 2002	Replies in 2012	Percentage of responses for the year 2002	Percentage of responses for the year 2012
Customer demand	3	5	25	25
Foreign market needs	2	2	16/68	10
Demand from the government	1	1	8/33	5
Decision of the Director	1	3	8/33	15
In order to introduce a regular job	3	3	25	15
To achieve the proper documentation	1	3	8/33	15
To achieve superiority over competitors	1	3	33/8	15
total	12	20	100	100

Table 6. Interest income due to the certificate for organizations

Interests	Replies in 2002	Replies in 2012	Percentage of responses for the year 2002	Percentage of responses for the year 2012
Better image	2	2	13/33	9/52
More regular work processes	2	2	13/33	9/52
Management improvement and responsibility acceptance	4	7	26/68	33/33
Communication improvement	1	1	6/67	4/77
Records management Improvement	2	2	13/33	9/52
Improvement in customer demand and government	2	5	13/33	23/82
Superior to competitors ,especially in export	2	2	13/33	9/52
Total	15	21	100	100

Interest income received due to the certificate was given in table 6. On this base, in both the years 2002 and 2012, largest net profit received due to certificate by organizations were management improvement and responsibility acceptance. (In 2002, 26/68 percent of responses and in the 2012, 33/33 percent). Later in the year 2012, 23/82 percent of organizations have announced that certificate improved the demand of customers and government too. The least important benefit that organizations gained was improvement in communication. (6.67 percent in 2002 and 4/77 percent in 2012).

Discussion and conclusion

The aim of this study is to recognize effective factors on receiving quality management system's certificate. And also motivation of organizations for receiving the certificate and profit income were verified. These factors, motivations and interests were verified between organizations who got ISO 9001 certificate in 2002 and other organizations who achieved certificate in 2012. Number of companies who gained certificate in 2002 and preserved it in 2012 are more than companies who had certificate in 2002 and could not maintain it in 2012. This growth reflects the value and importance of quality management in several companies. There are 3 main factors in both the researches. And improvement in these factors are the cause to get the certificate. 3 factors of document control, documentation, work definition, registration ability and documentation in general are the main factors that organizations got the ISO 9001 certificate on their bases.

All the above factors are related to the records management. Under study organizations acted weak in the field of documents control and documents registration. Furthermore, records research in internal audit, quality policy and planning for getting certificate are very important. And needs more concentration. Most important problem was related to quality management system which has been mentioned by audit officers in their visit in 2012. And was related to measurement section, analysis and improvement, monitoring and measurement, control of defective product, information analysis, and improvement. After that, most important problem was related to success of product, product planning, processes related to the customer, plan and improvement, purchase, managing the products and services, monitoring control, and measurement equipment. And least problem was related to responsibility of management section. Aims and quality policy, commitment, responsibility, credibility, communication and check. In both years, customer's demand has been the main motivation for getting certificate by organizations. It was important to introduce a regular job. After this, motivation to get a license to enter a foreign market was recognized an important matter. In both the years, 2002 and 2012 the most profit due to certificate gained by the organizations were management improvement and responsibility acceptance. And also, some of the organizations announced that certificate was the cause for improvement in customer's demand and government too.

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