REPUBLIC OF AZERBAIJAN

On the rights of the manuscript

ABSTRACT

of the dissertation for the degree of Doctor of Philosophy

IMPROVEMENT OF THE BUSINESS QUALITY MANAGEMENT SYSTEM

Specialty:	5308.01 – "General economics"
Field of science:	53 – Economic sciences
Applicant:	**Leyla Vagif qizi Yusifova**

BAKU – 2022

Dissertation work has been carried out at the "Business Management" department of the Azerbaijan State University of Economics (UNEC).

Scientific supervisor: Doctor of Philosophy in economics, Associate Professor
Hamid Insaf oghlu Hamidov

Official opponents: Doctor of Economic Sciences, Professor
Shefa Tofig qizi Guliyeva

Doctor of Philosophy in economics, Associate Professor
Gulnara Sadi qizi Hajiyeva

Doctor of Philosophy in economics, Associate Professor
Samira Ragif qizi Ahmadova

Dissertation council ED 2.10 of Supreme Attestation Commission under the President of the Republic of Azerbaijan operating at Azerbaijan State University of Economics.

Chairman of the Dissertation council:  signature — Doctor of economic sciences, Professor **Mahish Alish oghlu Ahmadov**

Scientific secretary of the Dissertation council:  signature — Doctor of philosophy in economics, assistant professor **Zohrab Hasan oghlu Ibrahimov**

Chairman of the scientific seminar:  signature — Doctor of economic sciences, Professor **Rasul Anvar oghlu Balayev**

THE WORK'S GENERAL CHARACTERISTICS

Relevance of the topic and degree of development. Establishing a quality management system in businesses is crucial for ensuring sustainable economic growth and boosting competitiveness in the free market. This system's underlying "quality" is really expressed as a relative indicator rather than an absolute one. How well something adheres to anticipated needs or standards is a relative indicator of quality. A set of organizational structure, approaches, controls, procedures, and resources that are thought to be required for the implementation of administrative management in businesses is how the concept of a quality management system is expressed. In fact, the idea of a quality system can be viewed broadly to include both the exact fulfillment of technical requirements and norms in production processes as well as ensuring the satisfaction of partners, employees, and society at large by setting management objectives based on customer needs and requirements. The use of quality systems in business is dependent on the organizational and legal structures, personality traits, and areas of operation. International management standards govern various management procedures according to the many domains of operation, including labor safety, administration, economic activity, information security, environmental protection, and food safety. All of these management standards, however, are based on quality management systems, which are put into place in accordance with the demands of the ISO 9001 international standard.

In order to compare results with indicators of effective management of quality systems across all domains, The final performance of the system, however, provides a chance to assess the performance of the management structures to which it is applied as well as the activity of the enterprise and the field as a whole because the individual results of the quality systems are tailored to the fields of activity. According to experts in this field, the enterprise-wide or industry-specific changes that have been implemented have a direct impact on the positive dynamics of the implementation of quality systems. Therefore, in this regard, it is thought to be crucial for the quality implementation of the system that the firm or field's goals are

accurately determined.

It should be noted that support is offered for ensuring that business development dynamics comply with international standards and requirements in the "Strategic Roadmap for the Production of Consumer Goods at the Level of Small and Medium Enterprises in the Republic of Azerbaijan" approved by the relevant decree of the President of the country on December 6, 2016, and as a result, entrepreneurship increases the level of accuracy of information related to development. The "Strategic Road Map of the National Economy Perspective of the Republic of Azerbaijan" also includes measures for commercial entity adaption to global norms. Thus, the importance of using international standards and credentials in local firms is particularly highlighted in that text in order to facilitate trade and provide an accurate assessment of quality.

Regarding the level of development of the topic, we would like to let you know that there are scientific works by scientists from our nation and other nations on the issues of improving the quality management system in business, looking into associated traits, figuring out the management system's economic efficiency, and assessing the suitability of management mechanisms. Among Azerbaijani scientists and researchers, scientific works of A.B. Abbasov, Z.Y. Aslanov, E.A. Mikayilov, N.A. Nuriyeva, F.I. Aslanzada and others can be mentioned. In their scholarly works, a number of scientists and researchers from other nations have also addressed issues with quality management procedures in company as well as suggestions for management system improvement. These scientists include T. Bujag, E. Gulsan, M. Halis, Z. Karatash, O. Kuchuk, M. Ozevren, N. Sarp, K. Ishikawa, B. A. Deysher, L. M. Fonseka, S. Medik, A. Minakshi, E. L. Psomas. , R.R. Ramfal, C.P. Wilson, E. Deming, M.A. Dremina, E.V. Minko, T.Y. Shemyakina, P. Shvards, S.Y. Shepetova and others. Despite this, new approaches to enhancing the quality management system in business are necessary in light of objective realities and worldwide changes, and the issue of balancing the mechanisms' compatibility with the needs of the moment arises. Further, more fundamental study is needed to address these concerns.

The object and subject of the research. The subject of the research is the rules, contemporary standards, methods, and procedures used in quality management systems, which are employed in business issues with various organizational legal structures.

The purpose and objectives of the study.

The goal of the research is to enhance the application of the quality management system in business, identify the key components of it, and justify its economic effectiveness on a theoretical and scientific level. It also seeks to determine the suitability of these procedures. The following objectives have been established in order to reach this goal:

- Research of theoretical-methodological approaches to the quality management system in business and systematization of their features;
- Determining and researching the theoretical components of the quality management system's economic viability in contemporary business;
- Analysis of how the principles and procedures of the quality management system are grouped and used in business;
- Analyzing how the quality management system is currently used in business;
- Systematization of consumer behavior characteristics and investigation of the influences on it to enhance the use of the quality management system in business;
- Making proposals and recommendations that are pertinent to the quality management system's use in company while considering new difficulties, new techniques, and procedures.

Research methods. Comparative-statistical analysis, systematic approach, methodological generalization and grouping, economic-mathematical statistics and survey methods have been used in the research process.

The main provisions defended::

- A more efficient and ideal set of indicators was created after a thorough and methodical investigation of the factors impacting

the quality of goods and services;

- The successful principles of action in this direction have been determined after studying the developed world experience of solving the rising challenges of the quality management system in business;
- The adaptability of quality management systems used by various businesses in our nation was examined, and favorable results were found;
- It is necessary to design a practical and effective approach for assessing the effectiveness of the quality management system in company, taking into account producer and consumer behaviors, attitudes, and viewpoints;
- With regard to contemporary issues, more effective and appropriate directions for the quality management system in business, as well as supported proposals and recommendations on making full use of the potential and perspectives already available, were established.

The scientific novelty of the research consists of the following:

- A block diagram of the variables influencing product quality was created after the methodological aspects of the quality management system in company were identified;
- The economic effectiveness of the quality management system was researched scientifically and conceptually in the framework of efficiency, which is one of the fundamental tenets of the economy;
- The mechanisms for applying the quality management system were identified, the economic effectiveness of their adaptability was justified, and relevant recommendations were made using the example of specific firms;
- Through the use of a survey method, the effects of the quality management system on customer behavior were discovered. Consumer behavior was also exposed to influences and susceptible to rapid societal changes, and their cause-and-effect correlations were identified;
- It was suggested to use a new technique to enhance the use of

the mechanisms and guiding principles of quality management systems.

The theoretical significance of the study. The methodological aspects of the quality management system in business, the scientific-theoretical study of economic efficiency, suggestions for improving the principles and mechanisms of the quality management system, the effects of the system on consumer behavior, and establishing cause-and-effect relationships of the effects all contribute to the theoretical significance of the thesis.

The thesis has practical value in that it addresses issues related to enhancing the quality management system by using procedures, models, and research findings related to the structure and administration of business processes across a variety of economic disciplines.

Approval and application. The primary recommendations and findings of the research work have been presented at international and republican scientific-practical conferences, including the XIX Republican Scientific Conference of Doctoral Students and Young Researchers (Baku-2015), the 55th International Scientific Conference on "Economic and Social Development of the Economy" (Sumgait-2016), and it was interpreted in the materials of the former (Hungary - 2021). Nine papers and theses that focus on the key findings of the dissertation study have been published. The improvements from the dissertation study are implemented and used effectively in the relevant UNEC structures.

Information base of the research. The research was conducted using the laws of the Republic of Azerbaijan, reporting indicators, and resources from the Azerbaijan State University of Economics, the Training, Teaching, and Certification Department of SOCAR, and the Quality Association Public Union.

The total volume of the thesis with a mark indicating the volume of the structural sections separately. The dissertation consists of 145 pages (236810 character), consisting of an introduction (11535 character), 3 chapters (Chapter I – 86211 character, Chapter II - 60312 character, Chapter III – 70707 character), conclusion (8046 character) and a list of references. 30 tables, 15 pictures, 1 scheme have been presented in the thesis work.

STRUCTURE OF THE DISSERTATION

Introduction

Chapter I. Theoretical and methodological foundations of the quality management system in business

1.1. Theoretical aspects of product and service quality improvement
1.2. Methodological approaches to the quality management system in business and their characteristics
1.3. Scientific-theoretical justification of economic efficiency of quality management systems

Chapter II. The modern state of application of quality management systems in business

2.1. Analysis of the possibilities of improving the principles and mechanisms of the quality management system
2.2. The current state and evaluation of the application of management systems in business

Chapter III. Improving the implementation of the quality management system in business

3.1. Evaluation of the impact of the quality management system on consumer behavior
3.2. Prospects for improving the application of quality management systems

The result

Reference list

MAIN PROVISIONS FOR THE DEFENSE:

1. A more efficient and ideal system of indicators was created after a thorough and methodical investigation of the factors impacting the quality of goods and services.

In the modern era, it is more crucial than ever to deliver quality goods or services across all industries as a result of escalating competition, structural change, technology, and customer awareness. Therefore, producing high-quality goods or rendering high-quality services has been one of businesses' concerns in recent years.

Complex quality management theories are credited to the work of scientists like Imai, who stressed the value of specialized personnel in management (Kaizen), Ishikawa, who created quality circles, and Taguchi, who saw the creation of a competitive environment and cost reduction in continuous quality improvement[1]. In addition to these, the 1920s are when the idea of quality management first emerged. Thus, the American Walter Shewhart's Statistical Duration Control approach was created as the first systematic quality thinking that is typically used as a reference. The concept of quality, assuring control after manufacturing, quality issues, and handling of after-sales complaints were all seen as the responsibility of craftsmen and engineers in the classical management style that was in use at the time[2]. Walter Shewhart's path also crossed that of individuals like V. Edwards Deming and Josep M. Curan, who are now regarded as "Prides of Quality" and were among the first to comprehend quality management in the 1920s. As a consultant for the US War Department in 1947, William Edwards Deming, one of the scientists with a nuanced approach to quality management, worked in Japan. Deming developed the guidelines for distributing statistical data to the Japanese, for using the Seward Cycle as a management method, and for general process control with specific charts. It aims to demonstrate that quality may be obtained through manufacturing process controls rather than through the manufactured

[1] Ishikawa, Kaoru, Toplam Kalite Kontrol, Çeviren: Semih Ordaş, 2. Baskı, KalDer Yayınları. – İstanbul: – 1997. – 99 s.

[2] Deniz, T. Kalite Yönetim Sistemleri, Açık Öğretim Yayını, - Eskiçehir, – 2013. – 28 s.

product itself. Deming highlights the significance of focusing on the total system's performance when identifying potential issues with an organization's management rather than specific individuals.

It should be mentioned that making a different design to suit each customer's preferences is a highly challenging condition from the manufacturer's point of view. We may observe, for instance, how customer expectations have evolved in relation to their TV requirements. Everyone desired a black-and-white TV in their home during the 1970s single-channel era so they could watch their one channel in that format. By the 1980s, every household had a television, but this time, they wanted color channels and numerous stations. Consumers expected and wanted their TVs to be smaller, have a lower volume, and eventually show more properly. They also wanted them to be connected to the Internet and have a 3D appearance in the current era. As can be observed from the example, consumer preferences are evolving throughout time. Manufacturers must promptly produce orders from customers while taking these adjustments into account. Producing high-quality items that satisfy consumer demands gives manufacturers an advantage. This situation involves two distinct components that are split into two groups—internal and external factors—and each of them has an impact on the quality of the product that will be created, as illustrated in the block diagram in figure[3].

[3]Selman, Nas, Kalite Yaklaşımları: [Elektron resurs] / (11/11/2013). http://www.uvcds.com/Qmag2013/index.html#/34/zoomed.

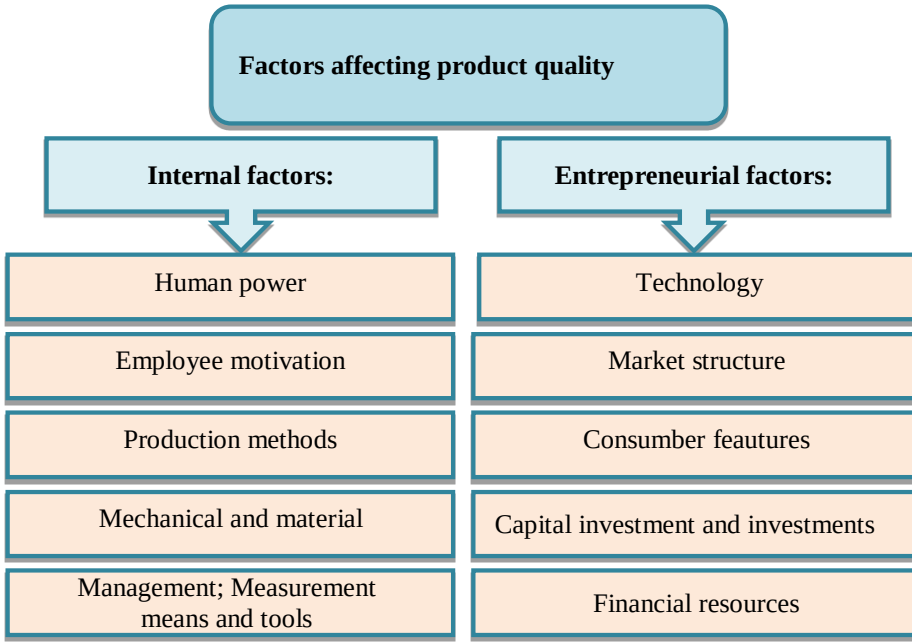

Figure 1. Group of factors affecting product quality and their block diagram (drawn by the author based on research materials)

To assure quality in the enterprise, careful attention must be paid to each of the quality affecting elements shown in Figure 1 under the two main areas because they all directly affect quality.

Different definitions can be given for the concept of quality, and we distinguish the most noteworthy of them: 1) Quality is a philosophy of life; 2) Quality is a management style; 3) Quality meets the needs and expectations of our citizens; 4) Quality is a factor of increasing competitiveness; 5) Quality prevents waste; 6) Quality affects costs the most, but leads to productivity the least; 7) Quality is a way to invest; 8) Quality is a continuous improvement process and 9) Quality is objective and subjective.

In summarizing what has been said, we can state that quality genuinely refers to the application of systems and methods intended for sustainable development, as well as the prompt and effective implementation of important actions.

2. The principles of effective action in this direction have been defined after studying the increasing global experience of managing the emerging difficulties of the quality management system in business;

"Total Quality Management", which started to be heavily used around the world in the 1990s, gained significant relevance for businesses as a way to improve quality, cut costs, and give themselves a competitive advantage by including workers in every step of the manufacturing process. Particularly after 2000, this management approach was introduced in Turkish private businesses and government organizations, following the example of developed nations like the US and Japan[4]. Quality management is portrayed as a system in which employees participate in decision-making processes, education, and improved employee health and safety, particularly in business literature.

In Japanese businesses, quality is the cornerstone of management systems. With this strategy, Japanese businesses have maintained their position on international markets, have increased their competitiveness and activity, and have made sure that high-quality goods are produced at competitive rates. Japanese manufacturing is export-driven and consequently caters to global markets. With its approach to quality, Japan has had considerable success and has emerged as a leader in this field. The following is a brief summary of how Japan differs from other nations in terms of quality control:

- From the lowest level employee to the highest level employee, firm employees in Japan have access to education and training in quality control. Additionally, all employees are aware of and frequently use the statistical techniques used.
- Both workers and foremen are a part of the quality control organizations established in Japan, and their level of activity is very high. In Western nations, there is no tendency in this direction..
- There are no legal requirements for quality control in Japan. Companies embrace quality control on a voluntary basis since they are

[4] Gülsen, E. 2012, "Toplam Kalite Yönetimi ve Türkiye'deki Uygulamaları", Toplum ve Demokrasi, Yıl 6, Sayı 13-14, Ocak-Aralık, -2012, - s. 93-109.

aware of this problem. One of the primary drivers of manufacturers to create products of higher quality and lower price is consumers' more choice brought about by free trade.

- Japan has embraced the idea of “sustainable development”. J. Juran proposed this idea, and it was successfully used. This idea holds that the standard of quality should not be static but should instead be constantly raised. The three guiding concepts of the idea—economic growth, social advancement, and environmental sustainability—overcome all impediments to expansion and are frequently used in actuality.

In terms of output and overall economic development, the USA is one of the top nations in the world. Joint ventures make up the majority of the large businesses in American industry, and the managers of these businesses have backgrounds in their fields. One of the strengths of the American economy is the use of advanced management techniques by American leaders. In the early 1980s, quality planning served as the primary means of implementing quality management in the United States. At that time, the needs of domestic production received little consideration. Plans for enhancing quality were performed without considering the business’ internal requirements. Problems resulted from such a quality management procedure. Meanwhile, several rational US business leaders saw the need to raise the caliber of domestic products. What solutions were suggested for this?:

- Employee motivation;
- Quality associations;
- Statistical verification methods;
- Calculation of costs spent on quality;
- Quality improvement programs;
- Paying attention to advanced problems such as financial stimulation of employees.

Under this tagline, the American Society for Quality Control (ASQC), a significant US organization with 53,000 total and individual members and formed in 1946, hosted its annual quality month. Two characteristics of the USA's quality experience can be recognized after analysis: 1) Stringent administrative control over the

execution of plans; 2) attention to the production volume and process of planning according to quality indicators; and 3) strict control over the quality of product development using mathematical statistical methods. On the other hand, the United States' adoption of restrictions on the continuous improvement of product quality did not prevent the elimination of the quality gap between Japan and the United States, which heightened the competition on the world market, which has since unified into a single, global market. Modern American businesses are characterized by the presence of a well-developed quality management system. Effective and well-designed programs for the implementation of complicated measures in line with the "man-machine-information" scheme are envisioned in this system, ensuring the required quality while lowering the associated costs[5].

Europe led the way in aggressively advancing quality assurance, product and service quality improvements, especially in the 1980s of the twentieth century. It is evident that the Western European nations are engaged in extensive and deliberate preparations for the creation of a single European market, for the creation of common standards and guidelines that can ensure the effective interchange of commodities and labor between nations. Special associations or organizations that perform regional coordination played a significant part in this effort. Uniform standards and uniform approaches to technological regulations were created as part of the process of preparing for the open pan-European market announced on January 1, 1993. National standards were modified to the quality system created on the basis of the 9000 series ISO standard, and their European counterpart EN 29000 series was added to the activity[6]. The three major organizations that deal with ISO 9000 certification were created in Europe: TUV Cert, DNV, and Lloyd's registration. In these directions, it is necessary to guarantee high quality standards, safeguard millions of consumers from subpar goods, and encourage manufacturers to achieve new

[5] Салимова, Т. А. Управление качеством: учебник : по специальности Менеджмент орг. Т. А. Салимова. - 2-е изд., стер. – Москва: Омега-Л, -2008.- 414 с.

[6] Шичков, Н.А. ИСО 9000 - стандарты управленческой деятельности // Инновации. – 2005. №4, – с. 80-82.

heights of excellence.

The idea of new harmonized standards, which included safety and security criteria, was established in 1985; however, these requirements are regarded as recommendations. The establishment of standardized requirements is crucial at the same time. It is therefore governed in accordance with European ISO 9000 and EN 29000 standards.

If we use Turkey as an example, a sister nation, it was typically foreign-invested businesses that pioneered the use of quality management. The shift to comprehensive quality management in Turkey is crucial for lowering inter-class tensions and managing staff, even though the primary purpose of the transition to quality management is to boost productivity and profitability.[7] The working class experienced a surge of protests and fresh strikes as a result of the spring 1989 demonstrations, which also caused financial losses. Quality management, which was first used in manufacturing at the beginning of the 1990s, has been put into practice recently to accommodate governmental organizations. At the Brisa facility, a joint venture between Sabanc and Japan, quality management was first used in Turkey in 1990. Brisa won the European Quality Award in 1996.

The use of quality management is gradually expanding, although it is frequently not fully executed and does not yield the desired results, according to research on quality management practices in Turkey. Although quality management, which tries to increase revenues and productivity by encouraging employees to participate voluntarily in the labor process, is sometimes successful, it encounters covert or overt employee resistance. Turkey, which has lagged behind in quality management methods compared to developed capitalist nations, can be said to still be in the early stages of putting this management paradigm into reality.

We think it's crucial to thoroughly research the quality management systems and methodological techniques listed above in

[7] Tematik Yazılar, Toplum ve Demokrasi, Yıl 6, Sayı 13-14, Ocak-Aralık, – 2012, – s. 93-109.

each individual nation and to look at the adaptability of key components for their use in our nation. According to us, Azerbaijan should prioritize meeting European quality standards and should work more closely with Turkey, which serves as the country's strategic partner in these initiatives. The oil and gas products, freshly developed national brands, as well as classic export-oriented goods like agricultural items, can all be deemed to have a bright future on the highly developed European market. Producing goods in accordance with current international standards and bolstering national quality management and quality control systems are the two most direct routes to entering these markets and establishing a presence there.

3. Analysis of the adaptability of the quality management systems used in various firms in our nation has yielded excellent results;

Public associations, such as "Quality Association", in addition to non-governmental organizations, have a significant impact on the creation of quality management systems and the certification of these systems in our republic. The public association "Quality Association" was founded on November 25, 2007, and is a self-governing non-profit and non-governmental organization with public-beneficial objectives. The Union's primary responsibility is to support educational efforts related to the nation's competitiveness and product quality.

In light of the aforementioned, the primary objective of such public associations should be to foster the initiatives of people and organizations in order to raise the caliber of goods and services in our nation and make them more competitive. We view managers who are motivated to improve the caliber and viability of goods and services in Azerbaijan and unify and spread knowledge of international experience in this area throughout the business community and general public of our nation as significant considerations.

The statistics of enterprises receiving certificates according to ISO standards in 2018-2020 are given in figure 2:

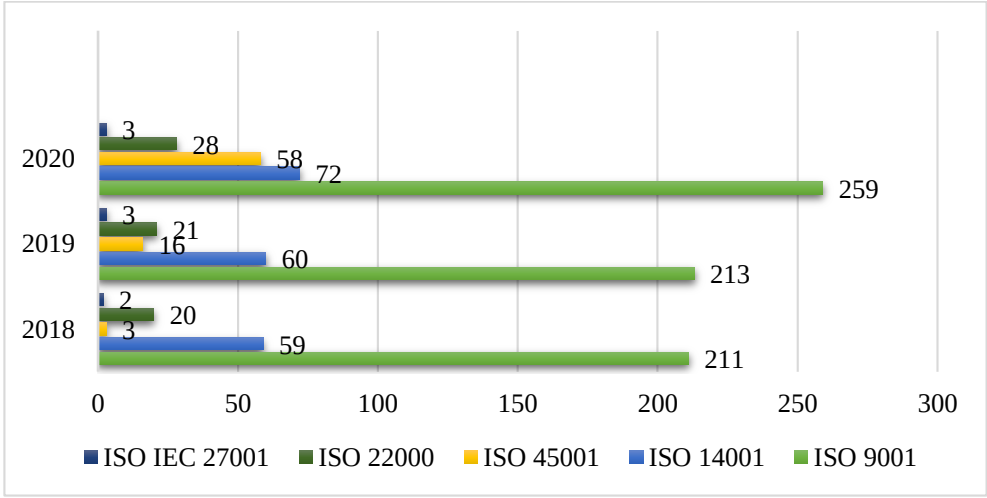

Figure 2. Statistics of enterprises that received certificates between 2018 and 2020

Source: www.iso.org - compiled by the author based on the information of the site. (https://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1)

In our nation, a total of 295 businesses earned certifications for ISO standards in 2018, and in 2019, 313 businesses received certificates, according to statistics on businesses that received certificates for ISO standards in the Republic of Azerbaijan in 2018-2020. The data show a substantial change despite the detrimental effects of the 2020 pandemic (coronavirus SARS-CoV 2). As a result, 420 businesses in total earned certificates in 2020. 420 businesses earned the certificate, and 259 of them are ISO 9001-certified businesses.

It should be noted that the State Strategy for the Development of Education, approved by the Decree of the President of the Republic of Azerbaijan dated October 24, 2013, takes into account the development of quality standards and indicators for the stages and levels of education based on advanced international experience related to the quality of higher education in the international experience and trends in the field of education. The building of a management system that adheres to international standards was regarded to be the major

direction of the sixth management point of the strategic growth program of the Azerbaijan State University of Economics (UNEC). On June 13, 2012, UNEC submitted an application to the Turkish Standards Institute Representation in Azerbaijan in order to receive the international accreditation for the ISO 9001:2008 "Quality Management System". The Azerbaijan State University of Economics (UNEC) received the international ISO 9001:2008 "Quality Management System" certificate as a result of the inspection carried out by the representative office's auditors. The university is the first public institution of higher learning in the Republic to have this certification. The Azerbaijan State University of Economics began working on a project on February 10, 2012, with the goal of developing a normative legal framework, adjusting it to the global system, and getting the international certification for ISO 9001:2008 "Quality Management System". Activities in the project are grouped in 3 directions*: on the clerical system, on the organization of the educational process, on conducting an internal audit*.

Currently, UNEC is in charge of verifying compliance with the requirements of the quality management system, assessing the degree of implementation, recording student academic progress, and exercising control over the enhancement of educational quality. Additionally, in accordance with the requirements of article 8.2.1 of the ISO 9001 quality management standard, surveys were done annually among staff, library activities, and students.[8] A requirement of Article 8.2.1 of the ISO 9001 quality management standard is to carry out the aforementioned survey. By identifying inconsistencies (issues) that currently exist in this field or could develop in the future, the annual assessment of employee satisfaction levels and student attitudes toward instruction using the survey method helps to improve the quality of the teaching process overall.

The State Oil Company of the Republic of Azerbaijan's

[8] Yeni ISO 9001:2008 sertifikatı UNEC-ə təqdim edilib. [Elektron resurs] / 13 yanvar 2016. https://unec.edu.az/yeni-iso-9001-2008-sertifikati-unec-e-teqdim-edilib/.

(SOCAR) Training, Education and Certification Department performs certifications in accordance with ISO 9001: “Quality management system,” ISO 14001: “Environmental management system,” ISO 45001: “Health protection and labor safety management system,” and ISO/IEC 17024: “Personnel establishes general criteria for companies by performing certification”. The Department oversees internal audits pertaining to the application of certification and coordinates the certification activity in the relevant SOCAR enterprises.

The amount of non-conformities found during audits at SOCAR's businesses is provided as of the end of 2020. (see photo 3).

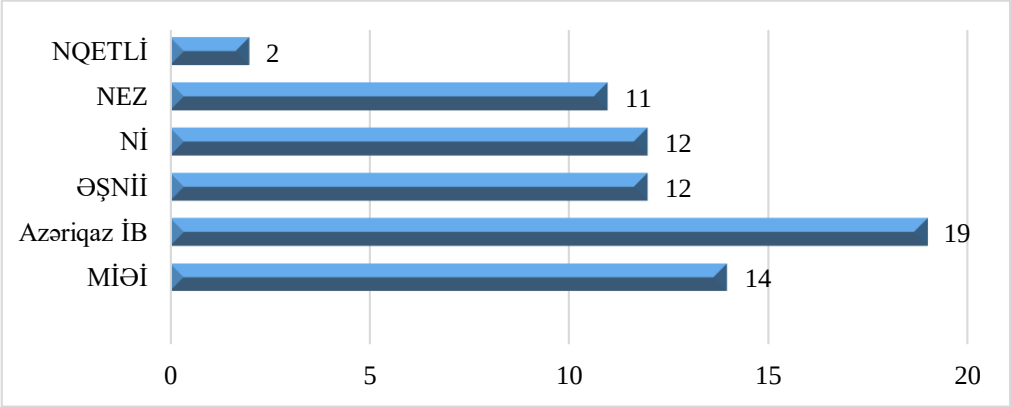

Figure 3. The number of non-conformities detected during the 2020 audits at SOCAR enterprises
(Source: Compiled by the author according to SOCAR reports).

If we summarize the information reviewed by SOCAR’s departments, organizations, and unions, we can rank the contradictions found in the following order:

1) In many circumstances, a quality risk assessment may not include all business operations. Employees are uninformed of the hazards involved in implementing processes and the safety precautions that should be taken;

2) The failure to do a cause analysis of the non-conformities discovered during the monitoring carried out by the enterprises frequently results in the measures implemented being insufficient;

3The analysis of how management systems are used by businesses is frequently of a formal nature. The task is not done, the customer’s

requests and requirements are not analyzed, the products are not compared, the inconsistencies are not examined, and so on;

4) In many instances, standard standards for management system documentation, codification, dissemination, revision systems, preventing the misuse of canceled papers, archival procedures, etc. are not required;

5) The major and auxiliary processes carried out by the firms are frequently not monitored, measured, and correspondingly recorded and preserved;

6) The mechanism of the goals' implementation is frequently not well-documented, the cause analysis of deviations from the goals' implementation is frequently not carried out, and the established objectives are frequently not created in a measurable way. These discrepancies were discovered more frequently.

It is possible to note certain recommendations for solving the inconsistencies listed on SOCAR:

1. Reviewing document coding in accordance with the Documented Information Management Procedure (IIS/P/01) created in accordance with Article 7.5 of the ISO 9001 Quality Management System is advised.
2. To increase awareness of the ISO 9001, ISO 14001, and ISO 45001 International Management Systems, internal education is advised..
3. It is advised to keep track of how well the structural units have gotten to know the work instructions during their distribution across the company.

4. It is necessary to create a practical and effective way for assessing the effectiveness of the quality management system in company, taking into account producer and consumer behaviors, attitudes, and viewpoints.

The qualities of their demand and its provision serve as the basis for a system of economic, social, and psychological aspects that express consumers' behavior in the market. By differentiating them,

consumer demand influences how the goods and services offered behave. Consumers' independent decision-making is founded on their expectations of their rights, which are crucial for both society as a whole and specific businesses.

The assessment's primary goal is to examine consumer attitudes that have an impact on the sales of goods and services provided by businesses that use quality management systems. We presented scientific hypotheses during the evaluation. The proposed hypotheses were examined, and the examination's findings were contrasted with them. The following are the definitions of those hypotheses' primary indicators (inducers) and content:

Hypothesis - H_0: "The application of ISO standards in enterprises affects the increase in the volume of sales of products and services".

Derivative hypotheses:- H_1, H_2, H_3, H4

H_1: "Application of ISO standards in enterprises affects the volume of products and services ";

H_2: "Branded products influence consumer behavior and increase sales volume"

H_3: "Application of ISO standards and branded products do not affect consumer behavior and volume of product sales";

H_4: Consumer behavior is influenced and socially legitimate.

The study was completed by 1006 (one thousand and six) respondents, who were both state and private sector personnel. All questionnaires were submitted electronically and anonymously. The results of the evaluation were acquired after the respondents' survey data were organized for analysis and entered into the SPSS Statistics 17 (Statistical Package for the Social Sciences) program.

Modern-compliant analytical and econometric analysis models were employed during the assessment, and tangible findings were obtained. As a result, during the study, some questions related to the hypotheses were categorized by binary analysis and the data were grouped by indicators (on frequency tables) (on cross tables). Additionally, factor computations and contemporary tests for verifying normal distributions were used during the investigation. Among the tests used are the Mann-Whitney test, the correlation test, and multiple

regression. The outcomes of the evaluation, processing, and justification of the data acquired were supported by scientific terminology. In additional analyses and comparisons, P0.01 was used to evaluate the findings at confidence intervals of P0.05 for the analysis process. The assessment's findings were categorized, compared to the hypotheses, and interpreted logically in order.

The reliability test of the survey (Cronbach's Alpha) was 80.6%. A Cronbach Alpha coefficient between 0.60 and 0.80 indicates that the test is moderately reliable, and between 0.80 and 1.00 indicates high reliability..

The analysis's findings showed that current societal circumstances can affect and alter consumer behavior. The volume of sales of goods and services is also positively impacted by the adoption of ISO standards in businesses. Thus, the implementation of ISO standards and product branding within businesses have an impact on overall sales volume, increase it, and boost competitiveness.

5. Utilizing all available possibilities and viewpoints, justified proposals and recommendations have been made regarding more effective and appropriate paths for the quality management system in company.

Businesses who want to gain a competitive edge in domestic or international markets must now provide goods with quality certificates. Both public and private businesses currently employ the quality management system. To ensure compatibility with current requirements, the ISO quality management system has undergone multiple revisions since it was first developed. One of the most widely used quality management systems worldwide is ISO 9001:2015, the most recent update. The fact that this standard is based on risk assessment distinguishes it significantly from its predecessor, ISO 9001:2008. A risk-based strategy, in accordance with ISO 9001:2015, ensures that systemic risks are recognized, addressed, and controlled.[9]

[9] Karataş, Z. "ISO 9001:2015 ile ortaya çikan farkliliklarin işletmelerin bakiş açisiyla değerlendirilmesi", Savaş H., MANAS Journal of Social Studies,Vol.: 8 – 2019. No: 4,– s.3516-3532

A "risk factor" is included in the new ISO 9001:2015 quality system for the setup, rollout, and ongoing improvement of the system. Risk is the potential for things to happen or things to be done that might hinder a company from attaining its strategic goals.[10] Differences between ISO 9001:2015 international standard and its previous versions are grouped as in table 1.

Table 1: Comparison of versions of the international management standard ISO 9001 series

ISO 9001:2015	ISO 9001:2008	ISO 9001:2000
Introduction	Introduction	Introduction
1. Field of application	1. Field of application	1. Field of application
2. Normative references	2. Normative references	2. Normative references
3. Terms and definitions	3. Terms and definitions	3. Terms and definitions
4. The enterprise and its environment	4. Management System	4. Management System
5. Leadership	5. Responsibility of management	5. Responsibility of management
6. Planning	6. Resource management	6. Resource management
7. Resources	7. Production of the product	7. Production of the product
8. Operations planning	8. Measurement, analysis and improvement	8. Measurement, analysis and improvement
9. Evaluation of activities		
10. Improvement		

Source: Compiled by the author

[10] Moving from ISO 9001:2008 to ISO 9001:2015.17 December 2017, 8 p. available at: https://www.iso.org (Accessed 09 Feb 2021).

The authorized new standard's articles 1, 2, and 3 have not changed, but article 4 has. Therefore, in accordance with regulatory criteria, the business implementing the standard must identify its stakeholders and needs based on current law. Additionally, Article 6 of the standard is mentioned in the primary changes.[11] Defining the operations of the organization implementing the standard, risks and opportunities, as well as quality goals and targets for reaching them, together with preparing potential adjustments, should be part of the new amendment to the "Planning" article. The title "Preventive actions" has been removed from the subsection "Improvement" of that article, even though the final article of the new standard named "Improvement" is taken into consideration in article 8 of the old standard called "Measurement, analysis, and improvement" (clause 8.5).

With all the data considered, we suggest using the "Lean and Six Sigma" approach to enhance the procedures in order to boost the effectiveness of implementing the most recent version of the quality management system (ISO 9001:2015).

The identification and assessment of operational risks faced by the business groups implementing the standard are covered in the sixth article of the quality management standard, titled "Planning". The enterprise applying the standard in this article must plan its activities and any potential adjustments, as well as identify risks and opportunities, analyze them, set quality goals, and set goals for reaching those goals.

We propose a novel strategy for managing the risks that can arise in organizations that utilize the quality management system in order to increase the efficacy of the system. The main objectives of this methodology are to precisely identify dangers, assess them, and determine the structures responsible for their control.

The business that will use the methodology should minimize the effects that threats could have and plan the response mechanisms using additional options. The process of determining expected and

[11] Fonseca, L.M. "ISO 9001: 2015 Revision". Proceedings of the 1st International Conference on Quality Engineering and Management (ICQEM), – 2014, 391-400 p.

unexpected elements that could prevent the organization from achieving its objectives is known as risk assessment.

In actuality, criteria are established after determining the likelihood of manifestation and the impact of each risk. The risk assessment table contains the risk levels that were determined using these criteria (see table 2).

Table 2:

Risk matrix

Impact										
	10	15	20	25	30	35	40	45	50	55
	9	13,5	18	22,5	27	31,5	36	40,5	45	49,5
	8	12	16	20	24	28	32	36	40	44
	7	10,5	14	17,5	21	24,5	28	31,5	35	38,5
	6	9	12	15	18	21	24	27	30	33
	5	7,5	10	12,5	15	17	20	22,5	25	27,5
	4	6	8	10	12	14	16	18	20	22
	3	4,5	6	7,5	9	10,5	12	13,5	15	16,5
	2	3	4	5	6	7	8	9	10	11
	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5
					Probability					

Source: Risk matrix prepared by the author

The "x" axis on which the matrix is located determines the probability of risk occurrence, and the "y" axis determines the impact of the risk. The following formula is used to measure the probable risk:

$$R_E = E_X T$$

Here;

R_E - Probable risk;

E- It is the probability that the risk will occur;

T- It is the impact of risk.

The methodology allows for the prediction, evaluation, grouping, and analysis of the key risks as well as the reduction of the impact of the risks that are most likely to occur.

Risks and their impacts can vary depending on the approach, the

environment, the actions taken, and the passage of time. Therefore, new danger areas are created as a result of shifting circumstances. Consequently, the entire risk management process must to be taken into account. Upon receiving management approval, this methodology can be applied in any firm, independent of its legal structure.

These are the main results of the thesis work:

1. A block diagram of factors affecting product quality was created, factors affecting service quality were systematically investigated, theoretical issues with the quality management system in business were explained and solutions were presented in accordance with those issues, and more effective methodological features were chosen and defined in real-world processes:

- The quality management system in business should have operational mechanisms that can keep pace with modern realities;
- Factors affecting the efficiency of the quality management system should be specified in a timely manner and measures should be taken to improve them;
- The methodological styles and tools applied and selected in the practical activity processes of the quality management system must meet the requirements of the time;
- Adequacy of governance principles should be maintained and necessary steps should be taken in this regard, etc..

2. Comparative analysis and summaries of the advanced quality management experiences from Japan, the United States, and Europe are provided, together with information on their similarities and contrasts. The relationships between product quality and competitiveness have been identified practically. Here, modern components and systems of knowledge acquired in the USA, Western Europe, and Japan have the highest efficiency indices. The Japanese experience stands out for having more tangible benefits and placing a high value on the manufacturer's relationships with consumers and

customers. It also involves all structural units in the business process participating in the quality management cycle, bringing out the best in the control system, and evaluating new knowledge and skills in an operational and systematic way.

3. The foundation and key components of the quality management system in business have been examined and supported by scientific evidence, in accordance with the circumstances of the principle of efficiency in business processes as one of the fundamental principles of the economy. The need for the ISO 9000 set of Quality management standards was proven, and their relevance was evaluated after an analysis of the rules and principles of their prior and most recent iterations. Here, we'd want to concentrate on a collection of scientific evidence:

- The quality management system that will be used in the sector of business should be tailored to the needs of that industry;
- The company implementing the worldwide standard must assess its surroundings, its resources—both current and future—and discover the true sources for their supply;
- Resources and reserves that are now in place should be assessed and continuously upgraded for the long term as part of the formation of any quality management system model;
- Reports should be written, predictions should be created, and a set of indicators on the effectiveness of the management system established for the activity process should be defined.

4. Utilizing the opportunities at hand, the experience amassed at the Azerbaijan State University of Economics regarding problems with quality management was examined. Here, it was more important to consider how the quality management system was organized, how adaptable the used mechanisms were, how well the operational mechanisms and management system models were implemented in light of the experience of the outside world, while also being efficient. We think the knowledge acquired at this university and the enhanced mechanisms of action can be beneficial in areas covered by our nation's economic and educational systems, including private issues.

On the basis of SOCAR, the largest state-owned enterprise in our nation that keeps growing year after year toward the status of a multinational corporation, a SWOT analysis of the quality management system was conducted, and the effectiveness and current condition of the quality management system used in the process of operation were assessed. As a result, SOCAR has been a leader in our nation in the application of technology and product advances, has drawn significant funding, and has embraced contemporary management techniques. According to these considerations, it is lawful for this organization to create and construct a more ideal and effective model of the quality management system for our nation, and the gained experience should be widely applied in our nation.

5. It is known that, regardless of the diversity and complexity of each business activity direction, the main focus of the quality management system in these processes is on the relationship between producer and consumer behavior. We studied the importance of ISO standards for food and non-food products through a survey, and comparative analyzes were carried out based on the questions asked in the survey, and at the same time, the correlation relationship was looked at. The survey method was applied with the participation of 1006 respondents in the assessment. As a result of the assessment, it was determined that the application of ISO standards in enterprises affects the level of competitiveness of the product and increases its sales, brand products influence consumer behavior and increase the sales volume. Consumer behavior is influenced and socially legitimate;

6. The principles and mechanisms of quality management systems, modern requirements, application possibilities, were analyzed by comparing them with previous options. As a result of the analysis, the appropriateness of the application of the "Lean and Six Sigma" method was determined in order to increase the efficiency of the processes in the quality management systems. The methodology proposed by us for the improvement of business processes allows the identification of ideal and chaotic situations of business processes. The possibilities of applying quality management systems were analyzed and a new mechanism was proposed to be able to correctly measure

and manage the risks of management systems. The application of this mechanism creates a more efficient and reasonable basis for correctly identifying, evaluating and controlling business risks in enterprises that apply international management systems..

Undoubtedly, the main goal of each research work is to identify more efficient and promising solutions as a result of the research conducted on the problems under consideration, to ensure their perfect efficiency. We hope that the obtained scientific innovations, scientific results, recommendations and proposals will be effective in the more efficient operation of business entities operating in our country, in the expansion of the customer contingent, and in reaching the set goals, and ultimately will contribute to solving the problems of improving the quality management system in business, etc.

The following scientific articles and theses were published in connection with the content of the dissertation work:

1. "Keyfiyyəti idarəetmə sistemindən istifadə məqsədləri və onların düzgün formalaşdırılması". Beynəlxalq Elmi Konfrans, Sumqayıt-2016 (27-28 aprel), 108-110 s.
2. "Keyfiyyəti idarəetmə sistemində biznes proseslərinin qurulmasi və optimallaşdirilmasi" Odlar Yurdu Universitetinin Elmi və pedaqoji xəbərləri, № 42, Bakı-2015, 33-37 s.
3. "Biznesdə keyfiyyəti idarəetmə sistemlərinin tətbiqinin səmərəliliyinin artırılması". İqtisadi Artım və İctimai Rifah" Jurnalı, AMEA İqtisadiyyat İnstitutu. 31 iyul 2021, № 2, 196 s.
4. "Keyfiyyət anlayışının formalaşmasının və inkişafının nəzəri əsasları". AMEA-nın Xəbərləri İqtisadiyyat seriyası" Jurnalı, AMEA İqtisadiyyat İnstitutu. 2021. № 1. səh. 44
5. "Keyfiyyəti idarəetmə sistemlərinin istehlakçı davranışına təsirinin qiymətləndirilməsi". "Geostrategiya" Jurnalı. № 4 (64). səh. 125
6. "Ali təhsil müəssisələrində keyfiyyəti idarəetmə sistemlərinin tətbiqinin zəruriliyi". Azərbaycan Milli Elmlər Akademiyasının 70 illik yubileyinə həsr olunmuş Doktorantların və gənc tədqiqatçıların XIX Respublika Elmi Konfransı, Bakı. 7-8 aprel 2015. səh.298-300
7. «Система менеджмента качества на предприятиях: факторы

риска». “Інвестиції: практика та досвід” України, Київ, №6, 2021, 42-47 с. DOI: 10.32702/2306-6814.2021.6.48
8. “Problems of application of quality management systemat enterprises”. 55th International Scientific Conference on Economic and Social Development, Baku, 18-19 June 2020, p.688-694
9. “The main directions of the organization of quality management system at the enterprise”. Iksad International Congress on Social Sciences-VI, Széchenyi István University, HUNGARY, March 26-28, 2021, p. 395-399. ISBN: 978-625-7636-29-2., Issued: 10.04.2021

The defense will be held on *28 September 2022* at *14.00* at the meeting of the Dissertation council ED 2.10 of Supreme Attestation Commission under the President of the Republic of Azerbaijan operating at Azerbaijan State University of Economics.

Address: AZ 1001, Baku, Istiglaliyyat street 6

The dissertation is accessible at the Azerbaijan State University of Economics Library.

Electron versions of dissertation and its abstract are available on the official website of the Azerbaijan State University of Economics.

Abstract was sent to the required addresses on *26 August 2022.*

Signed for print: 29.06.2022
Paper format: 60x84$_{1/16}$
Volume: 41363
Number of hard copies: 20

"AA – Computer" in the online industrial association
printed using ready-made slides.
For contact: capevi@internet.ru / (+99455) 201-2809