

Marketing research on the impact of the quality management system on labor productivity of light industry enterprises

Aiganyum S. Kubeyeva¹, Saira R. Yessimzhanova²

Received: June 16, 2020 Revised: July 13, 2020 Accepted: August 01, 2020

Түйін

Соңғы жылдарды әлемде ИСО 9001 сериялы халықаралық стандартқа сәйкес сапа менеджменті жүйесін енгізген ұйымдар саны айтарлықтай өсті, алайда сапа менеджменті жүйесінің кәсіпорынның өнімділігіне әсері жеткілікті дәрежеде зерттелген жок. Еңбек өнімділігін арттыру мәселесі Қазақстан экономикасы үшін өткір мәселелердің бірі болып қала бермек.

Бұл зерттеудің мақсаты - Алматыдағы женіл өнеркәсіп кәсіпорындарының еңбек өнімділігіне сапа менеджменті жүйесінің әсер ету дәрежесін анықтау. Мақалада Қазақстан Республикасының женіл өнеркәсіп кәсіпорындарының 1985 - 2020 жылдар аралығындағы негізгі экономикалық көрсеткіштері талданған. Маркетингтік зерттеулер статистикалық және салыстырмалы талдау әдістерін қолдана отырып, сараптамалық сауалнама негізінде жүргізілді. Зерттеу құралының сенімділігі анализі альфа-Кронбах коэффициентін қолдану арқылы жүргізілді. Барлық өлшеулер мен сынақтар Smart PLS 3 және SPSS 23 бағдарламаларында өткізілді.

Женіл өнеркәсіптегі еңбек өнімділігіне әсер ететін факторлар анықталды. Оларға сапа менеджменті жүйесі, экономикалық өсу қарқыны, инфляция деңгейі, несие бойынша пайыздық мөлшерлеме, валюта бағамы, демографиялық өсу қарқыны, өндірістің техникалық және технологиялық жағдайы, кәсіпорынның мақсаттары, ынтымақтастық, дағдылар, жұмыс тәжірибелісі кіреді.

Маркетингтік зерттеулердің истижелері сапа менеджменті жүйесі Алматы қаласындағы женіл өнеркәсіп кәсіпорындарының еңбек өнімділігіне оң әсер етеді деген қорытынды жасауға мүмкіндік береді. Сапа менеджменті жүйесін енгізу кезінде ақаулар саны азаяды. Сапа менеджменті жүйесінің еңбек өнімділігіне әсері сарапшылармен расталады.

Түйін сөздер: сапа менеджменті жүйесі (СМЖ), еңбек өнімділігі, женіл өнеркәсіп, сауалнама, ISO 9001, өнім сапасы.

Аннотация

В последние годы в мире значительно выросло число организаций, внедривших систему менеджмента качества по международному стандарту серии ISO 9001. Однако недостаточно изучено влияние системы менеджмента качества на производительность труда предприятий. Проблема повышения производительности труда остается одной из самых острых для казахстанской экономики.

Цель данного исследования – определение степени влияния системы менеджмента качества на производительность труда предприятий легкой промышленности города Алматы. В статье были проанализированы основные экономические показатели предприятий легкой промышленности РК за период 1985 по 2020 годы. Проведены маркетинговые исследования на основе экспериментального опроса с применением методов статистического и сравнительного анализов. Анализ надежности инструмента исследования проводился при помощи коэффициента альфа-Кронбаха. Все измерения и тесты проводились в программах Smart PLS 3 и SPSS 23.

Выявлены факторы, влияющие на производительность труда в легкой промышленности. К ним относятся система менеджмента качества, темпы экономического роста, уровень инфляции, уровень процентной ставки по кредиту, курсы обмена валют, темп демографического роста, технико-технологическое состояние производства, цели предприятия, сотрудничество, навыки, опыт работы.

Результаты проведенного маркетингового исследования позволяют сделать вывод, что система менеджмента качества положительно влияет на производительность труда предприятий легкой промышленности города Алматы. При внедрении системы менеджмента качества уменьшается количество дефектов. Влияние системы менеджмента качества на производительность труда подтверждают эксперты.

Ключевые слова: система менеджмента качества (СМК), производительность труда, легкая промышленность, опрос, ISO 9001, качество продукции.

¹ Doctoral candidate, PhD JSC University of Narxoz, Almaty city, Zhandosov St., 55 specialty Marketing, e-mail: Aiganyum.Kubeyeva@narxoz.kz, ORCID: <https://orcid.org/0000-0002-9052-8399>

² Doctor of Economics, Professor, e-mail: saira_sr@mail.ru

Abstract

In recent years, the number of organizations that have implemented a quality management system according to the international standard of the ISO 9001 series has grown significantly in the world. However, the influence of the quality management system on enterprise productivity has not been sufficiently studied. The problem of increasing labor productivity remains one of the most acute for the Kazakhstani economy.

The purpose of this study is to determine the degree of influence of the quality management system on the labor productivity of light industry enterprises in Almaty. The article analyzed the main economic indicators of light industry enterprises of the Republic of Kazakhstan for the period 1985 to 2020. Marketing research was conducted on the basis of an expert survey using statistical and comparative analysis methods. The reliability analysis of the research tool was carried out using the alpha-Cronbach coefficient. All measurements and tests were carried out in Smart PLS 3 and SPSS 23 programs.

The factors affecting labor productivity in light industry are identified. These include a quality management system, economic growth rate, inflation rate, loan interest rate, currency exchange rates, demographic growth rate, technical and technological state of production, enterprise goals, cooperation, skills, work experience.

The results of the marketing research allow us to conclude that the quality management system positively affects the labor productivity of the enterprises of light industry in Almaty. When introducing a quality management system, the number of defects is reduced. The impact of the quality management system on labor productivity is confirmed by experts.

Keywords: quality management system (QMS), labor productivity, light industry, survey, ISO 9001, product quality

Introduction

Productivity is the main engine of sustainable long-term growth. One of the manifestations of the growth of labor productivity of enterprises is to improve product quality.

Quality remains an integral attribute of product evaluation in today's rapidly changing market. The world has witnessed how quality management concepts have evolved from a specific problem area of a department to a system-wide application of full quality or excellent work quality. Many manufacturing organizations have begun to implement international quality standards in order to be competitive in the global market. The most common among which are the international quality standards of the ISO 9001 series [1].

After 30 years of its creation and global recognition as the basis of quality management for product compliance, manufacturing companies support their company's quality management system (QMS). Consequently, this scenario also affected light industry around the world due to problems in quality control [1].

There are many definitions of QMS, for example, the author D. Dolgov, QMS refers to "the organizational structure that includes the functions, documentation, processes and resources necessary to create, maintain the necessary level of quality at all stages of the product life cycle and apply to all types of manufactured or proposed for production" [2, p.24]. Smagina M.N., Gerasimov B.N., Parkhomenko L.V. consider the QMS as «a combination of the organizational structure, methods, processes and resources necessary for the general management of quality» [3, p. 304]. Kane M. M., Ivanov B. V., Koreshkov V. N., Shirladze A. G. write that the system is intended for general

and operational quality management, in order to ensure the required product quality that satisfies all participants in its production and consumption [4].

In this study, the QMS is considered according to the definition of ST RK ISO 9000: 2015, as a management system for the management and management of the organization in relation to quality. At the same time, quality means the degree of compliance of the set of inherent characteristics of an object with requirements. Requirement - a need or expectation that is established, usually assumed or required [5]. Labor productivity is understood as an indicator characterizing its productivity, the return of each unit of the used labor resource.

The relationship between the QMS and productivity is achieved through quality assurance and quality control, since it consists in measuring the achieved output tasks in comparison with the predicted output tasks [6].

Most countries in the world focus on improving the quality management system in light industry, since this area has important social and economic importance for the economy and provides jobs for most people. And in terms of consumption, it ranks second in the world, after the food industry.

The purpose of this study is to determine the degree of influence of the quality management system on the labor productivity of light industry enterprises in Almaty. To achieve this goal, the main economic indicators were studied and summarized, marketing research was conducted by means of a survey in order to identify the main factors affecting the productivity of enterprises. Quantitative results were analyzed to identify data relationships and determine the degree of their influence on each other.

Literature review

The basis of this study is the work of foreign and domestic scientific researchers: E. Deming, J. Juran, F. Crosby, F. Kotler, J. Evans, P. Dixon, M. Porter, B. Berman and others. Among domestic scientists, such authors as: Abdurakhmanov A.A., Grafkin V.N., Kiyansky V.V., Soloviev V.I., Minazheva G.S., Gordashnikova O.Yu., Seitbaeva E.R.

Kazakh scientist doctor of technical sciences, professor V. Solovyov argues that labor productivity, product quality and enterprise profit can be significantly improved not by finding the perpetrators, but by improving quality management, creating conditions for self-motivation, pride in the work of staff [7].

The advantages of introducing QMS to increase the level of labor productivity of enterprises are widely recognized in the world [8.9]. However, there are disputes about the impact of the QMS on productivity, as some literary sources say that it has a minimal effect, while others argue that, if used correctly, the QMS can have a significant impact on the productivity of enterprises [10].

An analysis of the literature on this topic shows the disagreement regarding the impact of the quality management system on labor productivity. This determined the need to review work on the theory of quality management, study international standards for a quality management system, as well as practical work on various methods of organizing a quality management system in enterprises.

Thus, a number of authors suggest that if we consider the QMS as a task, then this can lead to more inconsistencies in the organization [8, 11]. QMS increases the level of labor productivity in the case when the organization does not have a previous system. If the QMS is too complex, then the system cannot be successfully implemented, as this can lead to a misunderstanding among employees how to correctly apply the QMS in an organization. Therefore, for the effective implementation of the quality management system, an affordable, good QMS structure is needed [11].

The literature on this issue claims that large successful companies benefit from quality management in terms of productivity by reducing the number of inconsistencies, alterations and losses, as well as improving their reputation [10].

As you know, the leaders in the light industry are countries such as China, Southeast and Central Asia, South America, Turkey, where light industry is a key industry for the economy. For example, in China 15% of jobs and 16.4% of all exports are provided by the textile industry [12]. In addition, Chinese scientists and researchers came to the conclusion that the international standard

of the quality management system and the export tax policy of China ensure high competitiveness of China's textile production and sustainable development in the US market [13]. The application of international quality standards and the wide dissemination of the proposed sustainable production measures have led to huge changes in the Turkish textile industry, without the need for large investments in technology. Economic returns helped Turkish textile companies to withstand and be competitive in the global textile market [14].

Scientists (F. Crosby, 1979; E. Deming, 1982; J. Juran, 1988) emphasized the importance of quality management to improve business performance. In this sense, E. Deming noted that higher quality means lower costs, higher labor productivity, which can lead to the company reaching a greater market share and increasing its competitiveness. As a result, quality management can positively influence a company's competitive position, causing cost reduction and increasing the level of differentiation. This theory indicates that quality management can have a positive effect on company performance. This is due to the fact that quality can help reduce costs and eliminate duplicate work, inspections (checks), among other things, increasing productivity in the company [15].

Of particular interest are the works of Mukhtar CA, Rosli MZ, Zuhairi AH, Rahman A. [16], Ankur Goyal, Rajat Agrawal, C.R. Saha [8], Bastas A., Liyanage K. [9], Camila Fabricio Poltronieri, Gilberto Miller Devos Ganga, Mateus Cecilio Gerolamo [17] and others, describing the quality management system as a measure of labor productivity in the direction of continuous improvement, determining that The goal of the QMS is the overall quality management at all levels of business activity and the achievement of strong compliance by means of continuous improvement through effective and efficient work.

More than a million organizations are certified worldwide in accordance with the requirements of the international standard of the quality management system of the ISO 9001 series in more than 170 geographical areas and in a wide range of business sectors, the international standard QMS of the ISO 9001 series is, therefore, the "reference model and norm" for other control systems [9]. QMS, which are being implemented efficiently, have proved their importance for increasing the efficiency of the organization [11].

The studied and analyzed literature contains studies on the implementation of a quality management system, since it improves productivity by improving communication problems, minimizing losses, alterations, errors and strengthening control over suppliers and subcontractors [8,9,11].

From the analyzed sources, it becomes clear that the QMS is an on-site quality management strategy with a clear theme of continuous improvement. The system is applied by top management and must be adopted correctly throughout the entire quality cycle and the rest of the organization in order to use its full potential.

At the same time, analysis and synthesis of sources showed that there are practically no studies on the impact of the quality management system on the labor productivity of light industry enterprises, especially in the Republic of Kazakhstan.

Methodology

The process of acquiring knowledge in the field of scientific research begins with a philosophical foundation that helps guide and conduct research. The importance of determining the most appropriate research approach, especially in the methodology and methods of research should be rationally based on the philosophical worldview of the researcher [18].

Each researcher adheres to certain beliefs in his field or discipline of research, which develops when they communicate in a community of researchers. The types of beliefs held by researchers depend on their worldview, research problems, personal experience, and audience. These factors are considered important before choosing the most appropriate schemes for data collection methods [18].

The topic of this article was chosen on the basis of the researcher's experience in the field of confirmation of conformity of light industry products of the Republic of Kazakhstan, mainly in the field of quality control and quality assurance. Our experience as an expert auditor in confirming the conformity of the quality management system and in confirming the conformity of light industry products has made it possible to better understand the requirements of international standards and fundamental knowledge in a quality management system, such as a quality assurance system with the requirements of the international standard ISO 9001 series.

Since labor productivity and quality are subjective ideas and, therefore, conceptual variables for providing convincing data, maintaining an adequate context and connection with the subject, a pragmatic approach using mixed methods is a necessary methodology for this task.

The following methods were used in the work:

- comparative, with its help evidence was obtained, facts of compared objects in the light industry of Kazakhstan;

- statistical, including the study of quantitative patterns inherent in light industry;
- analysis of documents with which the necessary information was collected for the study.
- marketing research by survey, using the questionnaire.

Data was collected using a structured questionnaire that was developed based on the objectives of this document. Questionnaire questions were formed on the basis of a study of the literature on the topic of research. The questionnaire consisted of three sections, a total of 18 questions, in order to get as many answers as possible. The first section of the survey was designed to find out who the participants are, such as their professional position, age range, work experience, and whether they believe that there is a high level of defects in the industry. The second section was designed to assess labor productivity and identify common factors that affect productivity in light industry. The final section of the survey was aimed at studying the use of QMS in light industry. In addition, in the final section, the authors tried to measure whether the QMS affects production efficiency, including on-site quality, financial benefits, and other benefits. Respondents assessed the degree of their agreement or disagreement with the allegations presented on a five-point scale of Likert agreements, ranging from 1 to 5, where 1 is categorical disagreement and 5 is full agreement.

Before conducting the main study, a pilot test of the questionnaire was conducted, during which 18 respondents took part.

All these methods were used together, which contributed to the completeness and objectivity of scientific research, specificity, validity and consistency of the conclusions formulated in the article.

The basis for the development of any industry is its production. This paper analyzes the state of development of Kazakhstan's light industry, starting from independence to the present day. The data was collected from open sources: official statistical reporting indicators, expert and analytical publications, survey (questionnaire). Also in this study, descriptive statistics and regression analysis were used. The reliability analysis of the research tool was carried out using the alpha-Cronbach coefficient. All measurements and tests were carried out in Smart PLS 3 and SPSS 23 programs.

Results and discussion

For Kazakhstan, light industry is a traditional industry. In the days of the Kazakh SSR, it included 14 industries and 69 industrial associations and enterprises. The main economic indicators of

Kazakhstan's light industry for 1985 and 2019 are presented in table 1. In order to understand the dynamics of development of Kazakhstan's light industry, a statistical and comparative analysis of this industry was carried out.

Table 1 – The main economic indicators of Kazakhstan's light industry for 1985 and 2019

Indicators	1985 year	2019 year	2019 year in% compared to 1985
The number of workers in the industry	202,8 thousand	12,7 thousand	93,7
Cotton Fabric Production	130 million square meters	14 million square meters	89,2
Shoe manufacturing	30,6 million pairs	1,270 million pairs	95,8
Sock manufacturing	74,7 million pairs	15-16 million pairs	79,2
The share of light industry in the structure of GDP	4 %	0,2 %	95

Note - Compiled by the author based on materials [19]

As can be seen from table 1, the main economic indicators of 1985 are significantly higher than the indicators of 2019. In the light industry, 202.8 thousand people worked, which is 93.7% more than the number of 2019. More than 2000 types of products were produced, of which the production of cotton fabrics amounted to 130 million square meters, which is 89.2% more than today. 95.8% of shoes were manufactured, 79.2% more socks than in 2019. In 1985, industrial enterprises produced 22.6 million units of knitwear, 68 million units of knitwear, which is 90 times more than currently being produced. The share of industrial production in the total production of the republic amounted to 15.2%, and in the light industry of the USSR - 4%, which is 95% higher than today's figures.

In the 90s, the national light industry was practically lost. Economic relations of the republics of the USSR were broken, the raw material base of industry was undermined, cheap imported goods spilled over open borders, which finally finished off the industry.

Currently, domestic light industry performs both primary processing of raw materials and the production of finished goods. And it includes more than 20 sub-sectors, united in large groups: textile, sewing, leather, shoe, fur. There are 1,071 light industry organizations in Kazakhstan, of which twelve are large and twenty-eight are medium-sized. The remaining enterprises are small ateliers. The average capacity utilization is 26%, and the number of personnel is 12.7 thousand people. The

Republic of Kazakhstan is dominated by imported products 93%, compared with domestic 7%, one of the reasons for this is the low cost of foreign goods. Because of what, Kazakhstani producers have become not competitive in comparison with foreign ones, since consumers have a demand for raw materials of a certain quality and which are not produced in the country [19].

In certain goods, the cost of raw materials in the cost of production reaches 50%, and the duty on its supply is much less from 5% to 10%. The technical depreciation of equipment reaches 70% -80%, and labor productivity is only 15% - 20% of the corresponding indicator in developed countries. The situation is aggravated by the presence of shadow imports. Due to the increase in e-commerce, online stores of foreign goods. Basically, the supply is made by individuals whose goods are much less expensive (since they are not subject to taxes and duties), in comparison with similar goods from manufacturers [19].

In modern conditions, the market yield is equal to forty-five billion tenge. A share in the structure of GDP is 0.2%. The share of light industry in the world gross domestic product is 3%, and in large producing countries GDP is more than 10%. For example, in Portugal - 22%, China 21%, Italy - 12% [20].

The critical situation in the light industry of Kazakhstan is due to the fact that in the period of the formation of an independent economy, the priority was extractive industries with high added value.

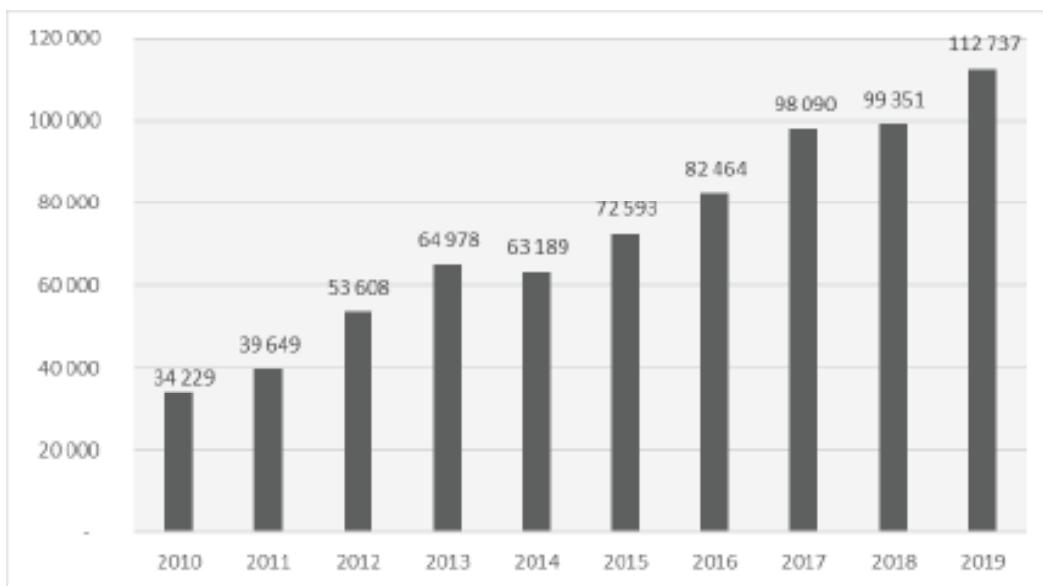
In the light industry of the Republic of Kazakhstan there is an insignificant level of investment for the improvement, modernization and restructuring of production and a lack of working capital. Kazakhstani producers have to update equipment themselves, at the expense of their own funds or loans, the update rate is 3% - 4% per year. In foreign companies, due to state investment support, this ratio is 15% —17% per year.

Turkish and Chinese companies demonstrate that light industry can increase output in high demand in a short time. Since the industry is characterized by a quick turnaround of invested

funds, low costs for creating jobs, and a high level of profitability. Light industry is interconnected with agricultural and chemical industries. It is able to adapt production under seasonal fluctuations, with a change in fashion and demand [12].

If in the Soviet years light industry occupied a key and important place in the economy, then at present there are all the opportunities for this in Kazakhstan.

The analysis shows that the production of light industry products in Kazakhstan during 2010-2019. showed positive dynamics, increasing over 10 years. For clarity, Figure 1 shows the dynamics of the volume of production of light industry in Kazakhstan in million tenge for 2010-2019.



Note - Compiled by the author based on data [21].

Figure 1 - Dynamics of the volume of production of light industry in the Republic of Kazakhstan or 2010-2019

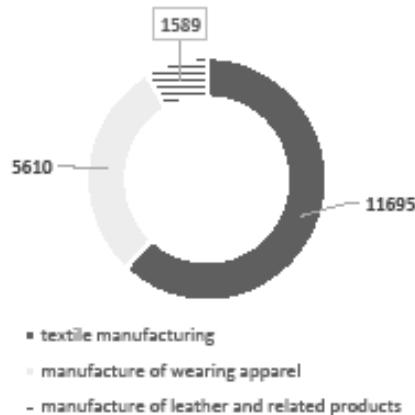
Over 10 years, production increased annually by fifteen percent. Significant growth has been seen in the last 5 years. In 2019, the volume of production increased by 35.6% compared to 2015. This is due to government measures to support the industry for 2015-2019. The purpose of which was to stimulate diversification and increase the competitiveness of the manufacturing industry.

In January - February 2020, the volume of goods released amounted to 18.9 billion tenge and increased by 12.4% compared with the same period last year (Figure 2). In the first place, textile products - 11.7 billion tenge, in second place the production of clothing - 5.6 billion tenge, then the manufacture of leather products - 1.6 billion tenge.

In order to identify the degree of influence of

the QMS on the labor productivity of the enterprises of the light industry of Almaty, a marketing study was conducted on the basis of an expert survey, the experts of the enterprises of the light industry of Almaty were the respondents.

Characteristics of respondents: medium and large enterprises of light industry. Thus, the experience and category of the organization were taken into account in the sample of respondents. The respondents were industry professionals in light industry. And due to the fact that there are few enterprises of light industry and sampling was conducted in the city of Almaty. The respondents were specialists working in KazLegProm-Almaty LLP and Sewing Enterprise Aziza LLP.



Note - Compiled by the author based on data [21].

Figure 2 - The volume of production of light industry of the Republic of Kazakhstan for 2 months of 2020, billion tenge

A random sampling method was chosen for the study. Experts were randomly selected from this group, which is a group of specialists working in the light industry. Each subject had the same probability of choice in the survey, including specialists, heads of departments, divisions, workshops, and company managers.

To analyze the data, we used the questions presented in a questionnaire developed by scientists of Mark Keenan & Ali Rostami as part of their study "The impact of quality management systems on construction performance in the North West of England" [22]. The questions were adapted in accordance with the purpose of the study to compile the questionnaire. The questionnaire was distributed by e-mail directly to the intended recipient with an accompanying e-mail. Only respondents had access to the survey. Although this method can reduce the number of participants' responses, it is believed that this method will ensure that only specialists in the light industry participate in this survey.

During the survey, 54 responses were received from respondents. 43 questionnaires were received through online filling, then 11 questionnaires were received during offline surveys of respondents. The data collected from 54 participants were processed and analyzed using SPSS 23. The data was then subtracted and randomly checked using the SPSS software to determine if any errors occurred. All 18 questions were analyzed.

The majority of respondents (66%) stated that the quality management system affects labor productivity. These results are consistent with previous studies [22].

The reliability analysis of the measurement tool was carried out using the alpha-Cronbach coefficient. Cronbach's Alpha (Cronbach's Alpha) is used to assess the reliability of issues when measuring a latent variable, a value greater than 0.7 is considered acceptable. A test conducted using Smart PLS 3 software showed that the measurement tool is reliable, the Cronbach coefficient is 0.742, which indicates that the internal consistency coefficient is considered acceptable, that is, the questionnaire is acceptable for measurement and this tool measures reliably.

The results of the regression analysis showed that a statistically significant factor is the quality management system. At the same time, the sign of the Beta coefficient for the "Negative factors" variable, namely "a high level of defects, goals that do not match the capabilities of the enterprise, lack of cooperation, lack of skills" is negative. The results of the regression coefficients are presented in table 2. The statistical significance of the regression coefficients is noted the sign "*" ($p < 0.05$), "***" ($p < 0.01$) and "****" ($p < 0.001$).

Table 2 - Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	1,338	1,257		1,065	0,292
Quality Management System	0,369	0,117	0,429	3,165	0,003***
Socio-economic factors	0,193	0,215	0,120	0,897	0,374
Negative factors	-0,004	0,103	-0,005	-0,040	0,969
Working climate	0,109	0,183	0,078	0,597	0,554

Note - compiled by the authors on the basis of research and analysis conducted using SPSS 23

The results of table 2 showed that the quality management system and productivity are positively interconnected, while the relationship of more than 0.003 suggests that the relationship is quite strong. Socio-economic factors (economic growth rates, inflation rate, interest rate on loans, currency exchange rates, the rate of demographic growth) are

also positively interconnected with productivity. Negative factors, such as a high level of defects, goals that are inconsistent with the capabilities of the enterprise, lack of cooperation, lack of skills have a negative relationship with performance. The working climate is practically not interconnected with productivity.

Table 3 - ANOVA test in relation to QMS depending on work experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6,607	4	1,652	2,648	0,045*
Within Groups	29,943	48	1,624		
Total	36,550	52			

Note - compiled by the authors on the basis of research and analysis conducted using SPSS 23

The ANOVA test by groups, depending on work experience, showed that specialists in the field of light industry with different work experience have different degrees of attitude towards QMS, the greatest difference exists between a group with more than 15 years of experience and a group with 7-10 years of experience . This suggests that a positive attitude towards QMS differs greatly in these two groups, those who work for more than 15 years evaluate QMS better than those who work from 7 to 10 years. In the remaining groups, the average QMS scores do not differ much. (the result is statistically significant, since the significance indicator is less than 0.05 and is equal to Sig. 0.045 (table 3).

Conclusion

Thus, from the sources studied and the analysis we can draw relevant conclusions regarding the further development of Kazakhstan's light industry.

1) To improve the industry, it is necessary to develop its own raw material base (production of cotton, wool, leather). In the Republic of Kazakhstan there are all the necessary resources for this, including the natural and climatic conditions allowing the cultivation of cotton, the presence of pastures for the development of animal husbandry. For this, the state decided to create favorable conditions, namely to subsidize the system of collection and purchase of raw materials (leather and wool) from farmers to light industry companies. This can lead to a reduction in the cost of finished products. On March 4, 2020, parliamentary hearings were held on Light Industry in Kazakhstan. Within the framework of which the senators decided to create a Council for the development of the agro-industrial complex, light and chemical industries.

2) To improve the industry, professional modern standards, updated educational literature and teaching methods are required. To this end, the Government decided to subsidize the creation of new jobs, in particular, the Bolashak program should provide quotas for the training of specialists in the light industry.

3) The industry practically does not conduct marketing and scientific research. The government decided to invest in scientific research and implement them in production, as well as subsidize new technologies for waste treatment and disposal, in the release of energy-saving technologies, and in the use of renewable energy sources. Support ongoing marketing research for the sale and marketing of consumer goods.

4) To combat the large share of imported goods on the market, it is proposed to further strengthen the control functions (sanitary-hygienic, technical, labeling). To improve and improve the quality of Kazakhstani goods, the Parliament decided in the near future to develop and adopt international industry quality standards and establish control over compliance with the standards. State aid is needed for light industry enterprises in order to switch to modern international standards in the field of quality, which will lead to free access of domestic products to world markets [19].

5) One way to improve the situation of light industry enterprises in Kazakhstan is to increase labor productivity, which can be affected by a competent quality management system at an enterprise that is recognized around the world.

Summing up, we can say that the result of this study is that, on the basis of an expert survey, we can confirm the general positive attitude of Light Industry experts to QMS, while the data reflect the relationship between improving quality on the spot and the financial benefits of QMS implementation. Advantages were identified such as increased efficiency, increased managerial control and a reduction in the number of defects, as well as other tangible benefits in labor productivity during the implementation of the QMS.

So according to the results of the study, we can argue that the quality management system positively affects the productivity of enterprises, which is consistent with the results of previous studies [22].

The results of the study showed that a high level of defects, goals that are inconsistent with the capabilities of the enterprise, lack of cooperation, lack of skills negatively affect labor productivity, which is consistent with the results of previous studies [22].

The economic growth rate, inflation rate, interest rate on loans, currency exchange rates, and the rate of demographic growth are also positively correlated with productivity, which is consistent with previous studies [22].

Based on the results, it can be assumed that respondents with extensive experience (more than 15 years) understand well the quality management system. Experienced specialists highly appreciate the impact of the QMS on the labor productivity of light industry enterprises in the city of Almaty. The leaders of domestic light industry companies should direct their efforts to this target audience and appoint specialists with long experience to key positions.

However, the limitations of this study are a small sample of respondents. Perhaps with an increase in the number of respondents, the results of other tests will be statistically significant. Another limitation of the study is that the respondents were only from the city of Almaty. In the future, a survey should be conducted among respondents from different regions. Perhaps the results will be different for specialists in megacities and other cities. Recommendations regarding future research to conduct a sampling not only in the city of Almaty, but also in other regions of Kazakhstan, especially the South, as in these areas there are large enterprises of light industry with a full production cycle.

In conclusion, I would like to note that the number of organizations that have implemented globally certified ISO 9001 quality management system is growing, emphasizing the importance and impact of ISO 9001 for organizations in all geographical regions of the world and business sectors. For many industries and customers, the application of international standards of the ISO 9001 series is currently the market standard and a mandatory requirement, therefore the ISO 9001 series standards are widely implemented in many business sectors around the world.

References

- 1 Yusof, N.J.M., Hayes, S., Sabir, T. and McLoughlin, J. (2014). «Quality Management in the Malaysian Garment Industry: Empirical Evidence from the Pilot Survey.» In making an impact with research. Proceedings of 7th Annual Manchester Metropolitan University Postgraduate Research Conference, 4th November 2014. Manchester: Manchester Metropolitan University Business School, pp.57.
- 2 Dolgov D.I. (2009). Quality management of engineering products (on the example of carriage products: abstract of thesis. Candidate of Economic Sciences / D.I. Dolgov. - Kazan, - 24 p. (in Russ.)
- 3 Gerasimov B. N. (2012). Quality management: textbook. allowance / B. N. Gerasimov, Yu. V. Churikov. - M.: INFRA-M, 304 p. (in Russ.)
- 4 Kane M. M.(2009). Systems, methods and tools of quality management: textbook. / M. M. Kane, B.V. Ivanov, V.N. Koreshkov, A.G. Shkhirtladze; under the editorship of M. M. Cane. - SPb. : Peter, 560 s.
- 5 ST RK ISO 9000-2017 "Basic Provisions and Dictionary"
- 6 Chiarini A.(2011). Integrating lean thinking into ISO 9001: a first guideline // International Journal of Lean Six Sigma, 2(2), 96–117.
- 7 Solov'ev V.(2018). Produktivnye vzaimootnoshenija v kollektive, kak faktor kachestvennogo menedzhmenta // Novosti Gosstandarta.,1,19-2. (in Russ.)
- 8 Ankur Goyal , Rajat Agrawal, C.R. Saha (2019). Quality management for sustainable manufacturing: Moving from number to impact of defects // Journal of Cleaner Production –241,1-15 <https://doi.org/10.1016/j.jclepro.2019.118348>
- 9 BastasA., LiyanageK.,(2019).Integrated quality and supply chain management business diagnostics for organizational sustainability improvement. // Sustainable Production and Consumption – 17,11-30. <https://doi.org/10.1016/j.spc.2018.09.001>
- 10 Thomas N, Ekambaram P, Mohan K.(2012) Costs and benefits of ISO9000-based quality management systems to construction contractors // Australasian Journal of Construction Economics and Building ,8(2), 23–29
- 11 Leong T, Zakuan N, Saman M, Ariff M, Tan C. (2014). Using project performance to measure effectiveness of quality management system maintenance and practices in construction industry // The Scientific World Journal, 1(1), 1–9.
- 12 Kalkabaeva G. (2015).Ocenka sovremenennogo sostojaniya i kreditnogo obespechenija predprijatij legkoj promyshlennosti Kazahstana v uslovijah Evrazijskogo Jekonomiceskogo Sojuza // Jekonomika i statistika otrraslej i predprijatij, 3, 66-72. (in Russ.)
- 13 Junqian Xu, Yong Liu and Liling Yang A (2018). Comparative Study of the Role of China and India in Sustainable Textile Competition in the U.S. Market under Green Trade Barriers // Sustainability.10,1348; doi:10.3390/su10051348: 21-42.
- 14 Emrah Alkaya, Göksel N Demirer (2014). Sustainable textile production: a case study from a woven fabric manufacturing mill in Turkey // Journal of Cleaner Production, 65,595-603
- 15 Kym C.(2013). Commitment to service quality in automotive dealerships: results from an Australian pilot study // Journal of Financial Services Research,13(1), 7-29
- 16 Mukhtar CA, Rosli MZ, Zuhairi AH, Rahman A. (2010). Quality cost in the construction industry – preliminary findings in Malaysia// Journal of Design and Built Environment.,6(1), 29–43.
- 17 Camila Fabricio Poltronieri, Gilberto Miller Devos Ganga, Mateus Cecilio Gerolamo (2019). Maturity in management system integration and its relationship with sustainable performance // Journal of Cleaner Production. 207, 236-247
- 18 Creswell, J.W.A (2015). Concise Introduction to Mixed Methods Research // London.
- 19 Nazarbaeva D. Mozhno li vozrodit' legkuju promyshlennost' Kazahstana? // Kazahstanskaja pravda 2020 [Jelektronnyj resurs]. URL: <https://www.kazpravda.kz/articles/view/mozhno-li-vozrodit-legkuu-promishlennost-kazahstana.pdf> (data obrashhenija: 04.03.2020). (in Russ.)
- 20 Obzor sostojaniya legkoj promyshlennosti Kazahstana: importozameshhenie, jeksport i gospodderzhka // Oficial'nyj informacionnyj resurus Prem'er-Ministra RK 2019 [Jelektronnyj resurs]. URL: <https://primeminister.kz/ru/news/reviews/obzor-sostoyaniya-legkoy-promyshlennosti-kazahstana-importozameshchenie-eksport-i-gospodderzhka.pdf> (data obrashhenija: 23.12.2019). (in Russ.)
- 21 Oficial'nyj sajt Komiteta po statistiki Ministerstva Nacional'noj Jekonomiki RK [Jelektronnyj resurs]. URL: <http://stat.gov.kz/> (data obrashhenija: 04.03.2020). (in Russ.)
- 22 Mark Keenan & Ali Rostami (2019). The impact of quality management systems on construction performance in the North West of England// International Journal of Construction Management,1-13. DOI: 10.1080/15623599.2019.1590974