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QUALITY MANAGEMENT OF BUSINESS PROCESSES IN THE CONTEXT OF ACHIEVING SUSTAINABLE DEVELOPMENT OF FASHION INDUSTRY ENTERPRISES

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INTRODUCTION. Sustainable development and victory in competition in the conditions of globalization and international division of labor can be ensured by enterprises that manage the quality of business processes on a systematic basis, which makes it possible to produce high-quality, environmentally safe products in an ethical way.

THE PURPOSE OF THE STUDY is the further development of methodological, methodical and practical approaches to the management of the quality of business processes of a fashion industry enterprise in the context of its achieving sustainable development.

RESEARCH METHODS. The research used scientific methods of theoretical generalization, analysis, synthesis, induction and deduction, structural-logical analysis, historical method.

RESULT. The high quality of products and services plays a decisive role in achieving sustainable development of the enterprise. The relationship between sustainable development and quality management at the evolution stages of enterprises and organizations is considered. Four stages have been identified, which correspond to organizational models, determined by a combination of the following features: closed – open system; rational – social thinking. The place of quality management and sustainable development in each organization’s model is determined. The quality chain reaction of E. Deming was supplemented and expanded

with additional links of ecological and social component and it was shown that high product quality leads to a positive economic, social and ecological effect, i.e. ensures the sustainable development of the enterprise. The special role of the ecological component of sustainable development is highlighted. In order to avoid and counteract environmental threats, enterprises carry out rational nature management measures and processes of ecologically balanced development. The indicators of environmental protection activities in Ukraine 2016–2020 were reviewed.

CONCLUSIONS. Sustainable development is the driver of quality management of business processes at the enterprise, which is confirmed by the logical chain of quality improvement influence on the economic, environmental and social components of sustainable development of the producer. The organization model in the period of open systems and social individual ensures comprehensive quality management and sustainable development of the enterprise. The quality management system of business processes at a fashion industry enterprise, which meets the requirements of the international standard ISO 9001: 2015, is a tool for realizing the goals of sustainable development of the enterprise.

KEYWORDS: sustainable development; quality; quality management; business process quality management system; E. Deming's chain; environmental protection activity.

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
17	2	1

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УПРАВЛІННЯ ЯКІСТЮ БІЗНЕС-ПРОЦЕСІВ У КОНТЕКСТІ ДОСЯГНЕННЯ СТАЛОГО РОЗВИТКУ ПІДПРИЄМСТВ ЛЕГКОЇ ПРОМИСЛОВОСТІ

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ПОСТАНОВКА ПРОБЛЕМИ. Сталий розвиток та перемогу у конкурентній боротьбі в умовах глобалізації та міжнародного поділу праці можуть забезпечити підприємства, які управляють якістю бізнес-процесів на системній основі, що дає змогу випускати якісні, екологічно безпечні вироби в етичний спосіб.

МЕТОЮ ДОСЛІДЖЕННЯ є подальший розвиток методологічних, методичних і практичних підходів до управління якістю бізнес-процесів підприємства легкої промисловості в контексті досягнення ним сталого розвитку.

МЕТОДИ ДОСЛІДЖЕННЯ. В дослідженні використано наукові методи теоретичного узагальнення, аналізу, синтезу, індукції та дедукції, структурно-логічного аналізу, історичний метод.

РЕЗУЛЬТАТ. Визначальну роль у досягненні сталого розвитку підприємства відіграє висока якість продукції та послуг. Розглянуто відношення сталого розвитку та управління якістю на етапах еволюції підприємств та організацій. Виділено чотири періоди, яким відповідають моделі організації, що визначаються комбінацією наступних ознак: замкнута – відкрита система; раціональне – соціальне мислення. Визначено місце управління якістю та сталого розвитку у кожній моделі організації. Ланцюгову реакцію якості Е. Демінга доповнено та розширено додатковими ланками екологічної та

соціальної складової і показано, що висока якість продукції призводить до позитивного економічного, соціального та екологічного ефекту, тобто забезпечує сталий розвиток підприємства. Виділено особливу роль екологічної складової сталого розвитку. Для уникнення та протидії екологічним загрозам підприємствами проводяться заходи раціонального природокористування та здійснюються процеси екологічно збалансованого розвитку. Розглянуто показники природоохоронної діяльності в Україні 2016–2020 рр.

ВИСНОВКИ. Сталий розвиток є драйвером управління якістю бізнес-процесів на підприємстві, що підтверджується логічним ланцюгом впливу підвищення якості на економічну, екологічну та соціальну складові сталого розвитку продуцента. Модель організації в період відкритих систем і соціального індивіда забезпечує всеохоплююче управління якістю та сталий розвиток підприємства. Система управління якістю бізнес-процесів на підприємстві легкої промисловості, яка відповідає вимогам міжнародного стандарту ISO9001: 2015, є інструментом для реалізації цілей сталого розвитку підприємства.

КЛЮЧОВІ СЛОВА: сталий розвиток; якість; управління якістю; система управління якістю бізнес-процесів; ланцюг Е. Демінга; природоохоронна діяльність.

Introduction. Sustainable development and victory in competition in the conditions of globalization and international division of labor can be ensured by enterprises that systematically manage the quality of business processes, which makes it possible to produce high-quality, environmentally safe products in an ethical way. In modern conditions, it is difficult to consider high-quality products that, although they meet the needs of consumers in accordance with their purpose, but cause damage to the surrounding natural environment, are manufactured underground, in violation of legal norms, in an unethical way, in the creation of which forced labor is used, child labor. No enterprise that does not aim for high quality products, environmental protection and transparency of its production processes can count on success in business, because this is what its stakeholders demand. Sustainable development is the driver of quality management of business processes at the enterprise. Quality management system of business processes, which meets the requirements of DSTU ISO 9001: 2015, is a tool for achieving sustainable development of a fashion industry enterprise.

Resources and methods. The theoretical basis of sustainable development as a modern paradigm of the development of civilization was studied in works of S.V. Bashlai, G.H. Bruntland, V.I. Vernadskyi, L.M. Ganushchak-Yefimenko, I.M. Gryshchenko, V.V. Hobela, A.O. Kasych, R.A. Kolyshko, O.V. Olshanska, L.P. Petrashko, O.M. Petroye, M.A. Saprikina, I.O. Tarasenko, etc.

A significant contribution to the development of the quality management theory was made by such scientists as A. Vaymerskirh, A.V. Vakulenko, S. Vardeman, L.M. Vitkin, J. Wumek, E. Deming, J. Juran, O.M. Livinsky, William M. Lindsay, D.P. Loiko, O.I. Momot, N.G. Salukhina, H. Taguchi, D. Tepping, V.G. Topolnyk, R. Tricker, A. Feigenbaum, M. Hammar, R.V. Shulyar, O.M. Yazvinska, etc.

However, to date, the issues of developing methodological and methodical bases for managing the quality of business processes in the context of implementing sustainable development, creating advanced systems for managing the quality of business processes based on the principles of sustainable development, which meet the requirements of the international standard ISO 9001:2015 at fashion industry enterprises have not been fully developed and need further improvement and development.

Results and discussion. Currently, it is recognized throughout the world that sustainable development is the basis for shaping the future of humanity. The most common definition of sustainable development was given in 1987 in the report of World Commission on Environment and Development: "sustainable development means meeting the needs of the present generation without jeopardizing the ability of future generations to meet their own needs" (Report

of the World Commission on Environment and Development: Our Common Future). Environmental and social problems are a by-product of the economic development of modern civilization. At the core of the sustainable development of the enterprise are ecological, economic, and social components, which must be balanced among themselves.

The relationship between sustainable development and quality management at the stages of the evolution of enterprises and organizations can be traced in fig. 1. Most often, four stages are distinguished in the development of the organization, which correspond to the models of the organization, which are determined by a combination of the following features: closed – open system; rational – social thinking. According to O.M. Kryvoruchko (2006) the criteria determining the essence of quality management are closedness-openness and sociality-rationality. In fig. 1 place of quality management and sustainable development in each organization model is given.

	Closed	Openness
Rationality	<p>Focus only on profit</p> <p>Rejection products</p>	<p>Social aspect of sustainable development</p> <p>Quality management based on international standards</p>
Sociability	<p>Focus only on profit</p> <p>Quality control</p>	<p>Sustainability</p> <p>TQM</p>

Source: developed by the author based on (Bondarenko, 2018; Evans and Lindsay, 2014; Kryvoruchko, 2006; George and Weimerskirch, 1998).

Fig. 1. Place of quality management and sustainable development in each organization model

The first stage lasted from 1870 to 1920. This is the stage of "closed systems and rational individual". The enterprise was considered a closed system that does not interact with the external environment. When making management decisions, people act rationally, based on certain logic and facts. To ensure the quality of products, products that do not meet the requirements of regulatory documentation are rejected. Approach to management focused on technological

and organizational improvements of the system due to increasing the efficiency of organization's functioning. Attention is paid only to financial indicators – income, profit, profitability, etc.

The second stage (1920–1950) – the stage of "closed systems and social individual". The enterprise is approached as a closed system, but it recognizes that a person as a social being does not always act rationally. Quality control of products is carried out. The purpose of the organization's activity is to make profit.

The third stage (1950–1990) – is the period of "open systems and rational individual". Theory of organizations moves forward, considering the organization as an open system, and at the same time rolls back, as it returns to ideas about individual as a being who acts rationally. The stage of quality management is carried out, which is aimed at not producing defective products, so it is necessary to manage quality at all stages of the product life cycle. In 1965, the stage of quality management in accordance with the requirements of international standards begins. In 1987, ISO international standards for quality management systems of the 9000 series were put into effect. In the field of corporate social responsibility and sustainable development, attention is paid to the social aspect. Methods of employee motivation are being developed, mainly economic.

The fourth stage (from 1990 to the present day) – the period of "open systems and social individual". At this stage there is a return to a social individual, but already within open systems. In this organizational model, comprehensive quality management and the transition of the organization to sustainable development are possible. The organization is focused on environmental, economic and social aspects of sustainable development, which must be balanced among themselves. Total quality management system provides fundamental concepts of business excellence and strategy for realization of sustainable development goals. The process approach to management, defined in the quality management systems of business processes, contributes to the clear implementation of sustainable development goals at the enterprise.

Quality products are moral and ethical because the labor invested in them has been put to good use. Quality products are environmentally friendly, as they will be used for a long time, and will not be thrown into the trash. High-quality products are characterized by the fact that there are ways to dispose them. High-quality products are economical, because they ensure the usefulness of the product at optimal costs.

It is most appropriate to create quality management systems for business processes at enterprises that meet the requirements of the international standard ISO 9001:2015, and which are a guarantee of high product quality, the most complete satisfaction of consumer needs and a tool for ensuring the sustainable

development of the enterprise. The quality management system of business processes can potentially ensure the sustainable development of a fashion industry enterprise, as it is aimed at meeting the needs of consumers and producing quality products. The high quality of fashion industry products will enable consumers to use them for a long time, and not send them to the landfill in the near future, thereby polluting the environment. If a quality product serves for a long time, then the social labor invested in it was not wasted, not lost, but used with benefit. The product can also be transferred to a second person in the format of free-cycling, thereby significantly saving social work. Therefore, a management system aimed at improving the quality of business processes can potentially ensure the achievement of sustainable development of a fashion industry enterprise. But, in our opinion, in order for it to actually perform this function, it is necessary to improve the quality management system, to integrate it with other management systems and in the general management of the enterprise.

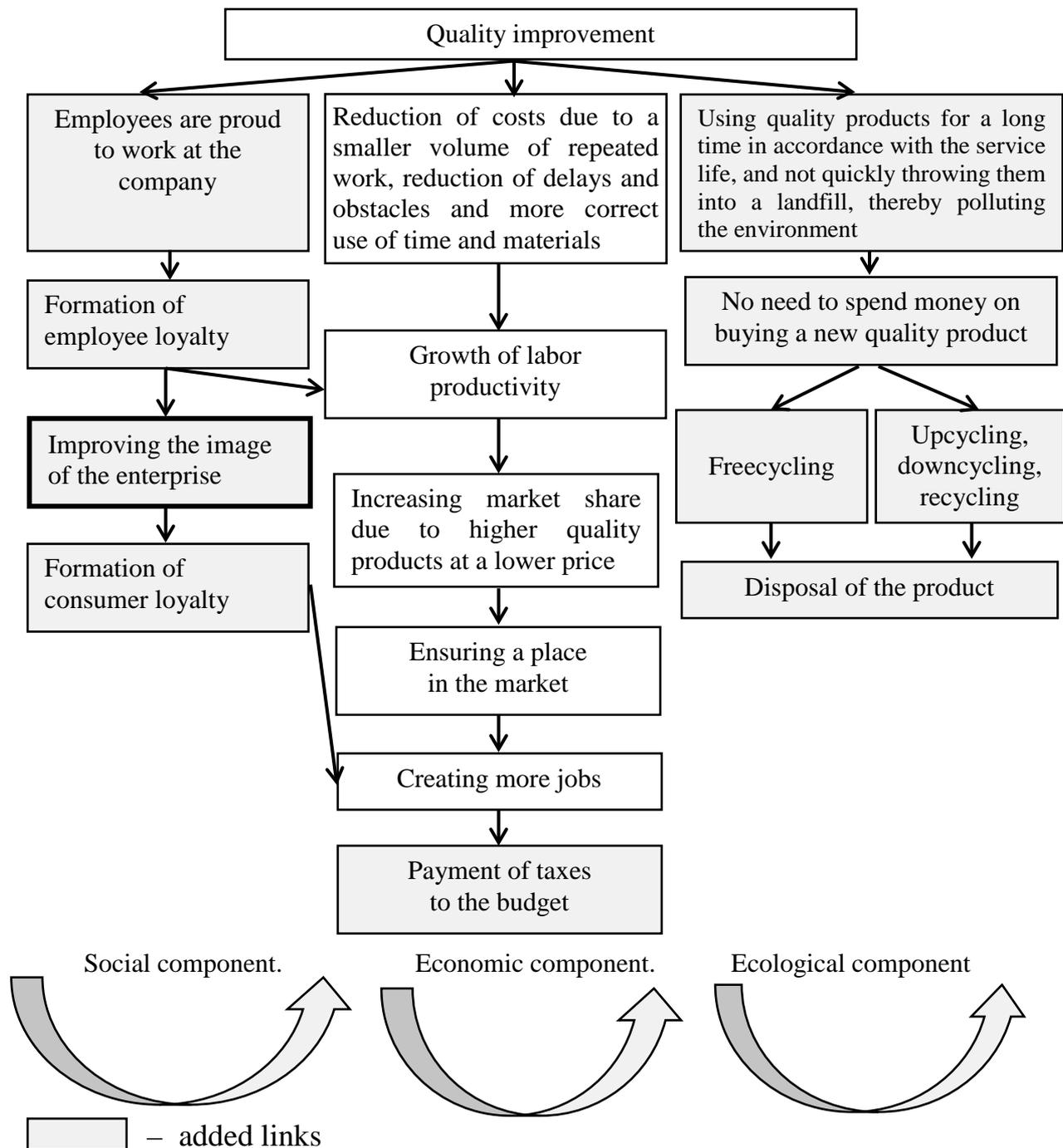
E. Deming (1993) argued that higher quality leads to higher labor productivity, which, in turn, provides long-term competitive strength. E. Deming proposed a chain reaction of quality, in which it was demonstrated that high quality allows increasing labor productivity, securing market share and create jobs, which ensures the fullness of the budget. That is, there is an economic and social positive effect from improving the quality of processes and products. We expanded this chain reaction of E. Deming with additional links and showed that the high quality of products also leads to a positive environmental effect, which means that it ensures the sustainable development of the enterprise (Fig. 2).

As a result of improving the quality of products, the loyalty of employees and consumers increases. At the same time, the reputation and image of the enterprise improves, the volume of sales increases, which also ensures the expansion of the number of jobs and revenues to the budget.

High quality ensures long-term use of products, which means that they will serve people for a long time and will not be thrown into the trash, polluting the environment. Consumers do not spend money on buying a new product, replacing a discarded one, saving the planet's resources. The consumer will also be able to transfer the product to someone else so that they can also use it for some time, or transfer the product for further processing in upcycling or recycling formats. The high quality of the products also implies disposal of the product without harming the environment.

Modern consumer, being literate and using the Internet, aspires to consume products that are environmentally friendly and ethically produced without excessive exploitation of workers and the use of child labor. Balancing the requirements of social, environmental, and economic systems at the enterprise is

an important task of the management of fashion industry enterprises, which strives for sustainable development.



Source: developed by the author on the basis of (Evans and Lindsay, 2014; Deming, 1993).

Fig. 2. Chain of influence of quality improvement on the sustainable development of a fashion industry enterprise

Today, the ecological component of sustainable development is particularly important. People need to ensure a comfortable life with modern benefits of

civilization, the latest achievements of scientific and technical progress, intellectual and spiritual development. An important task at the same time is the balance between more complete satisfaction of consumer needs and environmental protection.

The concept of sustainable development takes into account the fact that resources are exhausted, and products after use settle in nature in the form of waste. Therefore, nature provides resources for the economic system and absorbs the waste of production.

In order to avoid and counter environmental threats of anthropogenic origin, measures of rational nature management and processes of ecologically balanced development are carried out.

As V.V. Hobela (2021) rightly points out elements of the surrounding natural environment, such as air, water are not factors of production and therefore are not taken into account in the market pricing system. The enterprise carries out production activities, providing jobs, tax revenues to the budget, etc. But as a result of its activity, it pollutes the environment, which worsens the living conditions of other representatives of society and produces public costs, that is, it creates a negative external effect. In such a situation, a negative social effect is created because the criterion of V. Pareto's optimum is violated. According to V. Pareto's optimum in the system, improvement of the state of some elements of the system cannot be carried out without deterioration of the state of its other elements. The free market is not able to take these features into account and set the equilibrium price at a level that will compensate for public costs – a negative external effect (Hobela, 2021). Therefore, the state actively regulates the issue of environmental protection. In this regard, environmental taxation and environmental fines have been introduced in many countries, including Ukraine.

In Ukraine, there is an environmental tax for emissions of pollutants into the atmosphere by stationary and non-stationary sources of pollution, discharges of pollutants into water bodies, for the placement of solid waste, for the generation of radioactive waste, and fines are imposed on enterprises for environmental pollution.

Thus, the principle of compensation comes into play, according to which if not all members of society have benefited, taxes on fees create a social effect that allows all members of society to benefit and not lose.

In table 1, indicators of environmental protection activities in Ukraine 2016–2020 were reviewed. The costs of enterprises and organizations for environmental protection activities include capital investments in fixed capital for the construction of new and modernization of existing industrial facilities in the direction of increasing their environmental safety, annual current costs for maintaining the main funds of environmental importance, environmental taxes

paid by the enterprise, costs of enterprises for payment of fines in the field of environmental protection.

Table 1

Indicators of environmental protection activities in Ukraine 2016-2020.

Indicator	Years				
	2016	2017	2018	2019	2020
Gross domestic product, UAH million	2383182	2982920	3558706	3974564	4194102
Capital investments for environmental protection, UAH million.	13390.5	11025.5	10074.3	16255.7	13239.6
including for waste management, UAH million	2208.7	2471.0	1182.0	5754.3	2899.8
including for waste management, in capital investments for environmental protection activities, %	16.5	22.4	11.7	35.4	21.9
Current expenses for the protection of the natural environment, UAH million.	19098.2	20466.4	24318.0	27480.2	28092.6
including for waste management, UAH million	6719.6	7508.2	8830.2	10227.1	11197.1
including for waste management, in current expenses for environmental protection activities, %	35.2	36.7	36.3	37.2	39.9
Total expenses for the protection of the natural environment, UAH million.	32488.7	31491.9	34392.3	43735.9	41332.2
including for waste management, UAH million	8928.3	9979.2	10012.2	15981.4	14096.9
including for waste management, %.	27.5	31.7	29.1	36.5	34.1
Index of costs for environmental protection, % to the previous year	96.9	109.2	127.2	94.5	110.9
The share of costs for environmental protection at the expense of state and local budgets, %:					
in capital investment	2.8*	16.2	13.6	9.7	13.8
in current costs	2.9*	3.9	3.9	4.2	5.2
Total costs for environmental protection in relation to GDP, %	1.4	1.1	1.0	1.1	1.0
Environmental taxes paid by enterprises, UAH million.	4689.4	4389.5	4644.9	5540.4	5165.8

* only at the expense of the state budget.

Source: developed by the author based on (Official website of the State Customs Service of Ukraine; Official website of the Ministry of Finance of Ukraine; Statistical Yearbook of Ukraine 2020; Statistical Yearbook of Ukraine 2021).

Total costs for environmental protection in relation to GDP for 2016–2020 in Ukraine were small and amounted to only about 1%. The share of expenses for environmental protection at the expense of state and local budget funds in capital investments for environmental protection activities varies between 8–

18%, in current expenses 1.6–5.2%. This is a small fraction. The rest of the financing of environmental protection activities is carried out at the expense of the enterprises' own funds and other sources. And although budget funds play a significant role in creating a system of environmental protection activities, in Ukraine there is a tendency for funds from enterprises, organizations and other sources to dominate.

Conclusions. Sustainable development is the driver of quality management of business processes at the enterprise, which is confirmed by the logical chain of influence of quality improvement on the economic, environmental and social components of sustainable development of the producer. Organization model in the period of open systems and the social individual ensures comprehensive quality management and sustainable development of the enterprise. The quality management system of business processes at a fashion industry enterprise, which meets the requirements of the international standard ISO 9001: 2015, is a tool for realizing the goals of sustainable development of the enterprise. It is possible to trace the impact of quality improvement on the economic, environmental and social components of sustainable development of an enterprise that meets the needs of present generations without harming the ability of future generations to meet their own needs.

In order to avoid and counter environmental threats of anthropogenic origin, measures of rational nature management and processes of ecologically balanced development are carried out. The costs of enterprises and organizations for environmental protection activities include capital investments in fixed capital for the construction of new and modernization of existing industrial facilities in the direction of increasing their environmental safety, annual current costs for maintaining the main funds of environmental importance, environmental taxes paid by the enterprise, costs of enterprises for payment of fines in the field of environmental protection. Financing of environmental protection activities in Ukraine is carried out at the expense of state and local budgets, own funds of enterprises and other sources.

References

Bondarenko, S. M. (2022). Ekolohizatsiia upravlinnia yakistiu biznes-protsesiv na pidpriemstvi [Greening of quality management of business processes at the enterprise]. *Ekonomika ta suspilstvo = Economy and society*, 41. URL: <https://economyandsociety.in.ua/index.php/journal/article/view/1591> [in Ukrainian].

Bondarenko, S. M. (2018). Udoskonalennia diialnosti pidpriemstv na osnovi TQM ta EFQM [Improvement of enterprise activities based on TQM and EFQM]. *Collection of scientific articles based on the materials of the International scientific conference "Current directions of scientific research"* (pp. 158–161). Nuremberg, Germany, December 28, 2018. Verlag SWG imex GmbH, Nuremberg, Germany [in Ukrainian].

Report of the World Commission on Environment and Development: Our Common Future. URL: <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>.

Hobela, V. V. (2021). Ekonomiko-bezpekova ekolohizatsiia: teoriia ta praktyka [Economic and security greening: theory and practice]. Lviv: LvDUVS [in Ukrainian].

Evans, J. R., Lindsay, W. M. (2014). Total Quality Management. Cengage Learning Asia Pte Limited.

Kasych, A. O., Bondarenko, S. M. (2022). Retsyklinh yak sfera realizatsii derzhavnoho-privatnoho partnerstva ta instrument zabezpechennia tsilei staloho rozvytku [Recycling as a sphere of implementation of public-private partnership and a tool for ensuring the goals of sustainable development]. *Prychornomorski ekonomichni studii*, 76. URL: http://bses.in.ua/journals/2022/76_2022/27.pdf [in Ukrainian].

Kryvoruchko, O. M. (2006). Menedzhment yakosti na pidpriemstvakh avtomobilnoho transportu: teoriia, metodolohiia i praktyka [Quality management at road transport enterprises: theory, methodology and practice]. Kharkiv: KhNADU [in Ukrainian].

Merezha Hlobalnoho dohovoru OON v Ukraini [The UN Global Compact Network in Ukraine]. URL: <https://globalcompact.org.ua/pro-nas/gd-oon-v-ukraini/> [in Ukrainian].

Ofitsiinyi sait Derzhavnoi mytnoi sluzhby Ukrainy [Official website of the State Customs Service of Ukraine]. URL: <https://customs.gov.ua/event>.

Ofitsiinyi sait Ministerstva finansiv Ukrainy [Official website of the Ministry of Finance of Ukraine]. URL: <https://index.minfin.com.ua/ua/economy/gdp/>

Petrashko, L. P. (2013). Korporatyvna vidpovidalnist: kros-kulturni modeli ta biznes-praktyky [Corporate Responsibility: Cross-Cultural Models and Business Practices]. Kyiv: KNEU [in Ukrainian].

George, S., Weimerskirch, A. (1998). Total Quality Management: Strategies and Techniques Proven at Today's Most Successful Companies. Wiley. 272 p.

Tarasenko, I. O. (2010). Stalyi rozvytok pidpriemstv lehkoi promyslovosti: teoriia, metodolohiia, praktyka [Sustainable development of fashion industry enterprises: theory, methodology, practice]. Kyiv: KNUVD [in Ukrainian].

Pro Tsili staloho rozvytku Ukrainy na period do 2030 roku: Ukaz Prezydenta Ukrainy № 722/2019 [On the Sustainable Development Goals of Ukraine for the period until 2030: Decree of the President of Ukraine No. 722/2019]. URL: <https://www.president.gov.ua/documents/7222019-29825>. [in Ukrainian].

Verner, I. Ye. (ed.) (2021). Statystychnyi shchorichnyk Ukrainy 2020 [Statistical Yearbook of Ukraine 2020]. Kyiv [in Ukrainian].

Verner, I. Ye. (ed.) (2022). Statystychnyi shchorichnyk Ukrainy 2021 [Statistical Yearbook of Ukraine 2021]. Kyiv [in Ukrainian].

Deming, W. E. (1993). The New Economics for Industry, Government, Education. Cambridge, Mass: MIT Center for Advanced Engineering Study.

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