

ASERS

Journal of Environmental Management and Tourism

Quarterly

Volume XIV

Issue 2(66)

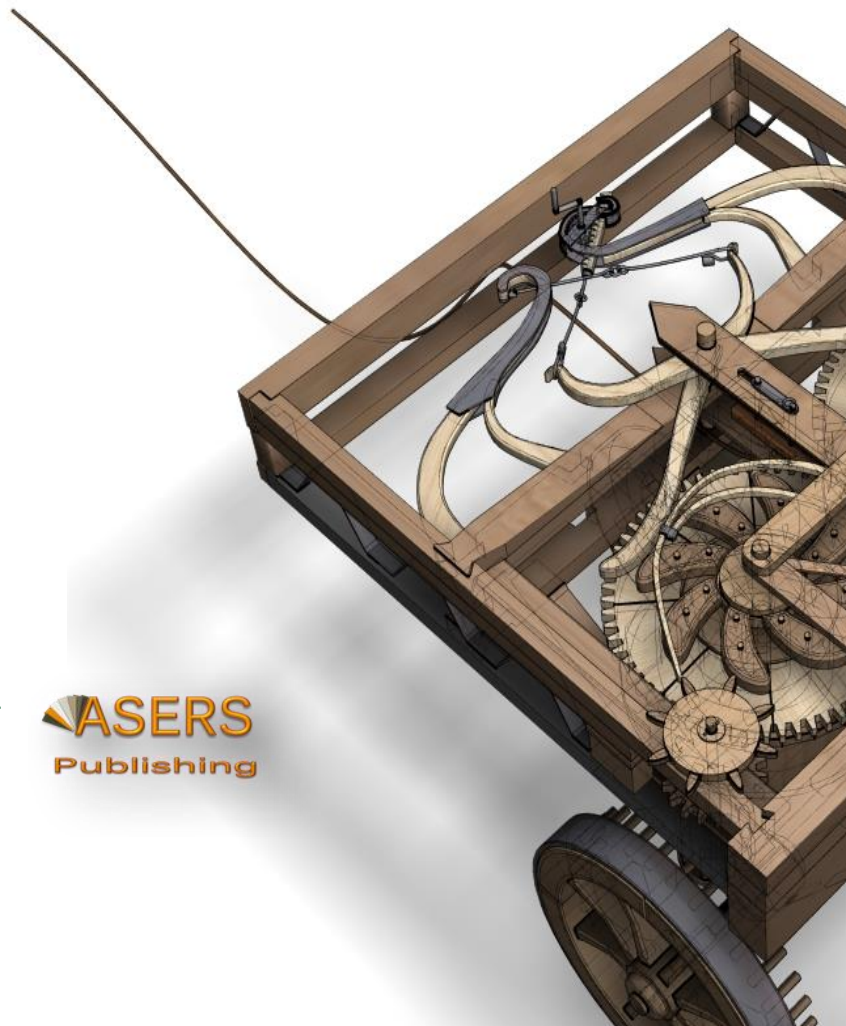
Spring 2023

ISSN 2068 – 7729

Journal DOI

<https://doi.org/10.14505/jemt>

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ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

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DOI: [https://doi.org/10.14505/jemt.14.2\(66\).22](https://doi.org/10.14505/jemt.14.2(66).22)

The Sustainable Development Strategy of the Light Industry and New Orientations towards Ecotourism

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Suggested Citation:

Mukhan, B., et al. (2023). The Sustainable Development Strategy of the Light Industry and New Orientations towards Ecotourism. *Journal of Environmental Management and Tourism*, (Volume XIV, Spring), 2(66): 529 - 539. DOI:[10.14505/jemt.v14.2\(66\).22](https://doi.org/10.14505/jemt.v14.2(66).22)

Article's History:

Received 20th of December 2022; Received in revised form 13th of January 2023; Accepted 19th of February 2023; Published 31st of March 2023. Copyright © 2023 by ASERS® Publishing. All rights reserved.

Abstract:

Being one of the industries in general, the light industry has certain features affecting the environmental crisis, as a result of the rapid growth of enterprises, the increase in production at a huge rate, consumer demand. The reason for this is the massive pollution of the environment with all sorts of emissions and industrial waste, which affects such sub-branches of tourism, such as ecotourism. Light industry, which is one of the promising industries, has a negative impact on the water fund, due to the discharge of untreated effluents into surface water bodies, which requires improvement of mechanisms for the use of nature in this area.

Keywords: ecotourism; light industry; sustainable development indicators; tourism industry.

JEL Classification: Z32; Q57.

Introduction

In modern conditions, it is necessary to use modern strategies, first of all, diversification strategies, using new types of equipment and technologies, new organization of labor and production. Considering the great role of light industry in ensuring economic and strategic security, increasing employment and, as a result, living standards, is one of the strategic tasks of the state, which requires special attention. Kazakhstan's policy regarding the clustering of textile and light industry is aimed not only at increasing competitiveness, but also at modernizing the

economy, developing tourism and its directions. At present, the problems of ecotourism are paid increased attention, because with the growth of enterprises not only increases their consumption of natural resources, but also the amount of waste polluting the environment.

1. Research Background

In terms of improving the quality of life of the population, economic development plays an important role in strengthening innovation, which is the basis of the country's competitiveness. The development of tourism offers economically favorable long-term prospects for Kazakhstan, as tourism not only generates foreign currency and has a positive impact on the balance of payments and gross exports of the country, but also increases the inflow of foreign currency, thereby replenishing the budget, expanding the labor market, increasing income and living standards (Tolepov *et al.* 2022).

Tourism contributes to the development of key sectors of the economy (transport, telecommunications, construction, agriculture and consumer goods production) through tax revenues to the budget, job creation and inflow of foreign currency (Dulatbekov 2022). Some authors consider light industry as a strategy for the development of a high-tech production process through the use of digital technologies (Ngai, Peng, Alexander, Moon 2018). While others believe that increasing the competitiveness of industry is a necessity caused by competition from other manufacturers (Simay, Deniz 2020).

Diversification of production structures will contribute to the development of quality and effective management (Krasnikova, Melnikov, Starozhuk 2019). Coordination of tactical and strategic tasks of industrial enterprises should comply with the principles of production diversification and their features. The process of regulation of the tourism sector is carried out by a large number of related organizations involved in promoting the development of world tourism, taking into account the state interests of various countries on the basis of creating a system of international legal regulation, studying the problems of tourism (Omarova *et al.* 2021).

Diversification is considered as one of the management tools with the possibility of using modeling of production processes (Wiersema and Beck 2018). Accordingly, the types of diversification depend on its types and the necessary resources. Diversification and modernization of production in Kazakhstan corresponds to the course of economic policy, focusing on high-tech and competitiveness of products (goods and services), thereby developing new forms and directions of tourism. The renewal of production through modernization is one of the priority activities of industrial enterprises.

The importance of tourism is currently determined by its role in any country (economic, social and cultural) and its positive impact on the economy. Over the past decades, the tourism sector has become an important area of global GDP due to its rapid development, which affects the development of other sectors such as agriculture, food and crafts, which contribute to the well-being of the whole society and contribute to the development of tourism, including eco-tourism and agro-tourism.

For example, the socio-economic development of rural areas was promoted by the development of tourism (Iorio, Corsale 2020) and the revival of rural areas (Gaderi and Henderson 2018). The role of tourism is to preserve the existing nature, culture, and local traditions, and the level of investment is necessary in the implementation of these tasks.

Several research studies, made (Roberts, Hall, and Morag 2018) reveal that agriculture could provide economic diversification, contributes to demographic stability, increases food security, improving socio-economic well-being. Muresan *et al.* (2018) argue that sustainable development of tourism is promoted by innovations necessary in environmental processes. Chien *et al.* (2022) and Torkington *et al.* (2020) believe that the development and growth of tourism, innovations are needed to help equalize inequality through the development of an effective ecological process. The introduction of effective innovations in the field of ecology has a great impact on the tourism industry, contributing to the sustainability of tourism (Ojogiwa 2021).

In order to maintain sustainable tourism growth, it is necessary to maintain tourist destinations, the practical application of ecotourism, according to Cobbinah *et al.* (2021), will help develop methods for sustainable tourism growth. The results of tourism sustainability are determined by economic aspects that require a controlled policy developed within the framework of ecotourism policy.

The integrated ecotourism model includes sustainable components that will improve the state of the environment, covering both ecological and socio-cultural aspects. In recent years, the growing interest of consumers in visiting non-commercial natural areas has contributed to the growth of ecotourism. As a result, the impact of mass and uncontrolled ecotourism on natural resources has increased significantly. However, research in the field of ecotourism is fragmentary, since this direction in the development of tourism has gained its

relevance relatively recently. Ecotourism conservation refers to the protection of natural resources and pristine landscapes without damaging factors such as land use changes.

With the growing interest in the ecological environment and the growing awareness of ecology, ecotourism has become more widespread, and the demand for tourism is growing every year. However, this growth has led to a number of environmental, social and economic problems in the development of ecotourism. For example, due to low public awareness of ecotourism, an increase in the number of tourists has many negative consequences for the local ecological environment, culture and economy, including disrespect for local culture and environmental protection, which leads to the construction of infrastructure and an increase in the economic burden to meet the needs of tourists (Ahmad *et al.* 2018, Chiu, Lee and Chen 2018, Shasha *et al.* 2020, Xu *et al.* 2020).

Therefore, it is important to expand the participation of stakeholders in the ecotourism community (Sobhani *et al.* 2022). Researchers argue that in order to protect endangered natural areas, it is necessary to increase community participation and education of this problem in order to encourage communities to participate more actively in the development of sustainable ecotourism.

The multifaceted goals of ecotourism are to reduce environmental problems, support democratic and decentralized communities, improve local livelihoods, improve natural resource management and reduce poverty in poor rural areas. The same opinion is shared by Blau and Panagopoulos (2022), who believe that with increased interest in the ecological environment and increased environmental awareness, ecotourism will become more widespread and demand for it. For example, well-planned tourism provides economic and political incentives for management and conservation and provides additional benefits to local communities and the local economy. Examples of successful nature tourism or its integration into multi-use planning can be found in the works of other foreign scientists.

Communities seeking to develop ecotourism need the most diverse support in areas such as waste management, hospitality skills and access to markets. Based on these findings, a community-oriented ecotourism model will be presented, demonstrating important interactions between communities, local economies and coastal ecosystems and creating effective mechanisms for the preservation of natural and cultural heritage (Phelan, Ruhanen and Mair 2020). The authorities of protected areas widely support ecotourism in many countries and contribute to the sustainable development of tourism (Lee and Jan 2019).

The right choice of a place for sustainable ecotourism development depends on a comprehensive survey based on socio-geographical issues and positive opinions of local authorities providing infrastructure, including physical facilities (hotels, canteens, roads, water supply), local culture (communities, festivals, traditional cuisine, clothing, food), services (banks, travel agencies) (Hashemi and Habibi 2018, Yee, Loc, Poh, and Vo-Thanh 2021).

2. Analysis of the Development of Light Industry

The development of light industry is of great importance for each country, having certain risks of both import dependence and export substitution. Kazakhstan has great advantages in light industry, as it has a huge growth potential, determined by the capacity of the domestic market of light industry products. It consists of the consumer goods market (with an average annual expenditure of 350 thousand tenge per person and a population of 18.3 million people, the market capacity is 6.4 trillion tenge).

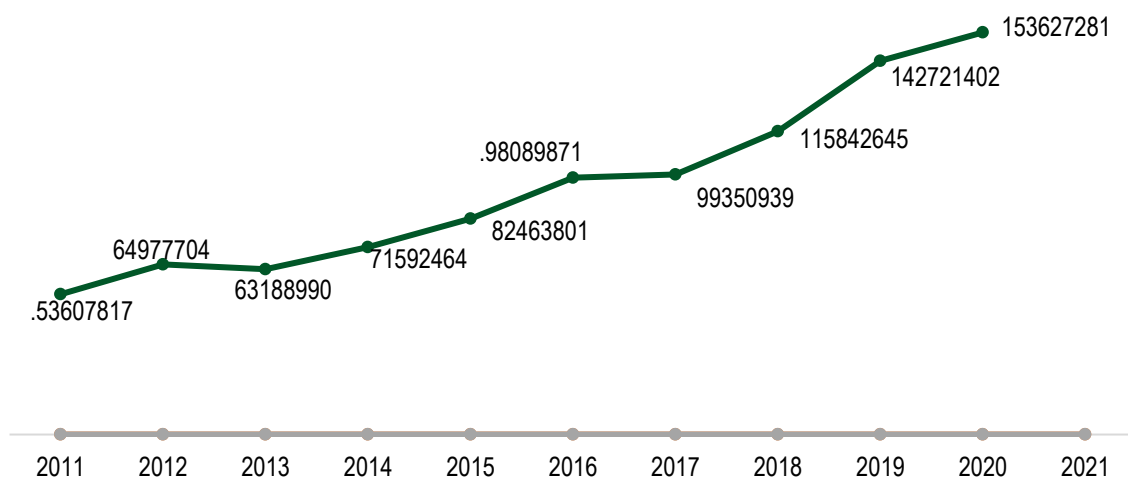
Diversification of light industry production is becoming an inevitable reality, creating a long-term and well-predicted demand for labor resources, which will give an additional multiplier effect in a number of related industries. Kazakhstan has created conditions for the development of the domestic raw material base on the basis of the agro-industrial complex, in particular, animal husbandry, the development of agriculture and agrotourism. Light industry plays an important role in the economy of any country, contributing to the employment of the population, raising the standard of living of people. Kazakhstan has favorable conditions for the development of light industry:

- first, the geographical location. Kazakhstan is located near regions producing raw materials (Turkmenistan, Uzbekistan, Tajikistan). Kazakhstan is also located near potential markets for light industry products (Asia, Europe, Russia, etc.);
- secondly, the resource base for the development of light industry has significant potential, in particular, because in the regions where cotton is grown, there are significant labor resources;
- thirdly, the state has taken significant measures to develop the textile industry. In particular, a legislative framework was created with the adoption of the laws "On Special Economic and Industrial Zones", "On the Development of the Cotton Industry".

Nevertheless, despite all the favorable conditions, this industry in the republic remains extremely underdeveloped (the share in the manufacturing industry in the republic is 5.5%). At the same time, the industry is technologically closely interconnected with the agro-industrial complex and the chemical industry.

The transformation of the light industry in Kazakhstan was one of the most difficult: output and the number of employees decreased tenfold, all new niches in the face of weak tariff protection of the domestic market were filled with cheap imports. However, in recent years, especially after a series of tenge devaluations in 2015–2020, the Kazakh light industry has become more competitive due to cheaper labor. State money came into the industry, which led to an increase in the number of investment projects.

Figure 1. Indicators of light industry of the Republic of Kazakhstan for 2011-2021



Source: compiled by authors

Table 1. The volume of industrial production of light industry in the regional context

Region	01.01.2018	01.01.2019	01.01.2020	02.02.2021	01.01.2022
Republic of Kazakhstan	98.089.871	99 350.939	115.842.645	142.721.402	153.627.281
Akmola	5.875.166	6.870.966	4.980.144	8.879.911	9.196.991
Aktuibinsk	1.249.684	2.800.332	2.146.032	2.967.693	2.940.780
Almaty	13.646.763	11.608.278	16.518.973	17.733.193	19.826.130
Atyrau	2.319.757	3.536.461	4.101.264	4.814.469	4.491.188
West Kazakhstan	1.011.171	1.338.387	886.858	1.120.971	1.212.069
Zhambyl	3.184.394	3.678.374	3.522.805	3.552.602	4.543.390
Karaganda	6.072.582	5.399.083	5.448.485	7.037.971	6.858.395
Kostanay	3.332.278	2.935.673	3.757.371	3.568.527	2.423.630
Kyzylorda	1.896.765	1.234.861	1.234.340	1.062.048	1.128.473
Mangistau	2.462.316	2.634.950	2.990.811	2.764.149	2.469.955
South Kazakhstan	..	..	..	..	..
Pavlodar	4.818.643	5.234.834	6.993.675	7.028.168	8.235.478
North Kazakhstan	5.241.649	1.854.027	1.602.727	2.028.133	4.169.914
Turkestan	6.503.781	8.579.042	12.996.286	19.564.855	24.004.474
East Kazakhstan	4.581.498	4.905.796	4.780.059	8.682.534	7.570.741
Astana city	3.569.328	3.343.685	4.458.336	4.452.573	9.117.295
Almaty city	14.016.529	10.834.674	13.468.055	15.728.431	14.430.479
Shymkent city	18.307.567	22.561.516	25.956.424	31.735.174	31.007.899

Source: compiled by authors according to www.stat.gov.kz

The development of light industry in Kazakhstan is influenced by factors such as the exchange rate of tenge to foreign currency, as it is necessary to purchase resources for production purposes, as well as the possibility of access to financing, having the opportunity to create competitive products with automation and integrated production system.

The development of light industry is of great importance in many foreign countries, since the industry has social and economic importance and provides high employment. The share of light industry in global GDP is about 3%, while in the largest producing countries it is more than 10%. For example, in Portugal is 22%, China is 21%, Italy is 12%.

In Kazakhstan, the impact of industry on the economy is almost insignificant - 0.2% in the structure of GDP, and the share in the manufacturing industry does not exceed 1.2%. In dynamics, the development of light industry looks as follows (Figure 1).

The volume of light industry in Kazakhstan in 2022 grew by almost 7%. In the republican volume of light industry, the share is: Almaty region amounted to 12.4%, Zhambyl - 2.5%, Kyzylorda - 0.7%, Turkestan region - 13.7%, Almaty city - 11.0% and Shymkent - 22.2%.

The leaders in the production of clothing are the Almaty region (18.8% or 10.1 billion tenge), the cities of Almaty (15.7% or 8.4 billion tenge) and Shymkent (13.9% or 7.5 billion tenge). The leader in the republic in the production of leather and related products is the city of Almaty. Light industry has great potential in Kazakhstan, having opportunities to expand the market and export products, as Kazakhstan has geographical advantages, bordering China, as well as being in the single market with Russia and Kyrgyzstan, in the EAEU, where there are no customs borders and restrictions.

3. Strategy for the Sustainable Development of Light Industry

The formation and implementation of strategies for the sustainable development of light industry requires, first of all, the development of appropriate methodologies for assessing the sustainability of the industry, which should be combined with methods of static and dynamic approaches that characterize the state of the system at the moment and characterize the degree of development of the enterprise over a certain period of time. In our opinion, the sustainable development of the industry can be assessed using the methods of mathematical statistics.

Indicators for each group of the sustainable development component of the industry, as a rule, are considered in dynamics, which makes it possible to identify trends, the trend in the development of the industry. The trend in the series of dynamics is a pattern that manifests itself in a change in the levels of the series of dynamics. Oscillation is the inverse property of stability.

The measure of the fluctuation of the dynamic series is the average square of the deviations of the actual levels, calculated according to the trend. It can be measured by the standard deviation. The relative measure of fluctuation is the coefficient of variation (3.1). The average level of the time series is defined as a simple arithmetic average of the levels of the time series (3.1):

$$\bar{y} = \frac{\sum y_i}{n} \quad 3.1$$

The standard deviation is the square root of the sum of the squares of the deviation of the individual level of a speaker row from its average level (3.2):

$$\sigma = \sqrt{\frac{\sum (y_i - \bar{y})^2}{n}} \quad 3.2$$

The coefficient of variation is equal to the ratio of the standard deviation to the average level of the time series (3.3):

$$V = \frac{\sigma}{\bar{y}} \quad 3.3$$

By the value of the coefficient of variation for each indicator, one can judge the degree of its stability (Table 2). In accordance with this, we propose to allocate zones of a stable position of the industry, a weakly stable position, an unstable position, a crisis situation.

Table 2. The relationship between the coefficient of variation and the level of stability

The coefficient of variation	Sustainability level
0-0,1	Stable position
0,1-0,3	Weakly stable position
0,3-0,5	Precarious position
Above 0,5	Crisis position

Source: compiled by authors

The coefficient of variation can give an assessment of the stability of each indicator separately, but cannot assess the stability of the development of the industry as a whole. For this purpose, we propose to introduce an integral indicator of stability, calculated as a geometric mean value (3.4).

$$K_{stab.} = \sqrt[5]{K_1 \times K_2 \times K_3 \times K_4 \times K_5}, \quad 3.4$$

where: K_1, K_2, K_3, K_4, K_5 – sustainability coefficients for the structural, production, economic, social and environmental component of the industry's sustainability.

Private sustainability indicators (3.5) can be determined on the basis of coefficients of variation of indicators (V_i) according to their importance (a_i). The importance of indicators can be determined based on peer review:

$$K_i = \sum a_i \times V_i, \quad 3.5$$

where: V_i is coefficient of variation of individual indicators, a_i is indicator significance level.

Thus, on the basis of the proposed methodology, the level of sustainable development of industries is established, on the basis of which a conclusion is made about its ability to implement its further development strategy. To increase the visibility and the possibility of comparing the level of sustainable development of various industries, you can build a petal diagram, along the coordinate axes of which the obtained integral values of the types of sustainability are set - structural, industrial, economic, social and environmental (Figure 2).

Figure 2. Graphical representation of the level of sustainable development of light industry, Kazakhstan



Source: compiled and calculated by authors

As we can observe, the least stable is the economic component of the development of light industry in Kazakhstan, while investment and innovation activities and financial results of the industry are in an extremely unstable position. And if investments and innovations are the reason for the low performance of the industry, then the financial results, in our opinion, are a consequence of the "deplorable" state of affairs in the domestic light industry, which require global re-equipment and modernization of production.

As a result, the integral indicator of the stability of the domestic light industry is:

- the obtained value of the integral indicator indicates the weak stability of the industry.
- changing the state of affairs in the industry is possible due to investment and innovation activities.
- let's define the relationship equation between the volume of output and the volume of investments - innovations based on the correlation-regression analysis.

Consider the construction of a regression equation in the presence of a connection between the effective and two factor signs:

- the volume of industrial production (y) will act as an effective feature;
- as factor signs, the volume of investments in the industry (x_1) and the volume of innovative products of the industry (x_2).

The multiple linear regression equation is:

$$y = a_0 + a_1x_1 + a_2x_2 \quad 3.6$$

In accordance with the least squares method, the sum of the squared deviations of the actual value of the effective indicator from the theoretical one should be minimal. In the case of multiple linear regression, if there is a connection between the resultant and two factor characteristics, the equation takes the form:

$$\sum_{i=1}^n (y_i - a_0 - a_1 x_{1i} - a_2 x_{2i})^2 \rightarrow \min \quad 3.7$$

Minimizing the sum of squared deviations, we obtain a system of normal equations (2):

$$\begin{cases} na_0 + a_1 \sum_{i=1}^n x_{1i} + a_2 \sum_{i=1}^n x_{2i} = \sum_{i=1}^n y_i, \\ a_0 \sum_{i=1}^n x_{1i} + a_1 \sum_{i=1}^n x_{1i}^2 + a_2 \sum_{i=1}^n x_{1i} x_{2i} = \sum_{i=1}^n x_{1i} y_i, \\ a_0 \sum_{i=1}^n x_{2i} + a_1 \sum_{i=1}^n x_{1i} x_{2i} + a_2 \sum_{i=1}^n x_{2i}^2 = \sum_{i=1}^n x_{2i} y_i. \end{cases} \quad 3.8$$

As a result, the desired system of equations takes the following form:

$$\begin{cases} 10a_0 + 65256a_1 + 31301,9a_2 = 831484 \\ 65256a_0 + 475985706a_1 + 206758866,9a_2 = 5593812158 \\ 31301,9a_0 + 206758866,9a_1 + 126100042a_2 = 2440081797 \end{cases}$$

Having solved the system of equations and having determined the parameters a_0 , a_1 , a_2 , we obtain the desired regression equation:

$$y = 78438,1913 + 3,6513x_1 - 6,1073x_2$$

The multiple correlation coefficient was:

$$R = \sqrt{1 - \frac{s_e^2}{\sum (y_i - \bar{y})^2}} = \sqrt{1 - \frac{7124909649,149}{8731072410,4}} = 0.4289$$

This indicates that the relationship between trait Y and factors X_i is not strong.

Paired correlation coefficients were: $r_{yx1}=0.254$, $r_{yx2}=-0.328$. The values of the pair correlation coefficient indicate a low linear relationship between x_1 and y . The values of the pair correlation coefficient indicate a weak linear relationship between x_2 and y . Let's calculate the partial correlation coefficients. The partial correlation coefficient differs from the simple linear pair correlation coefficient in that it measures the pairwise correlation of the corresponding features. (y and x_i) provided that the influence on them of other factors (x_j) eliminated.

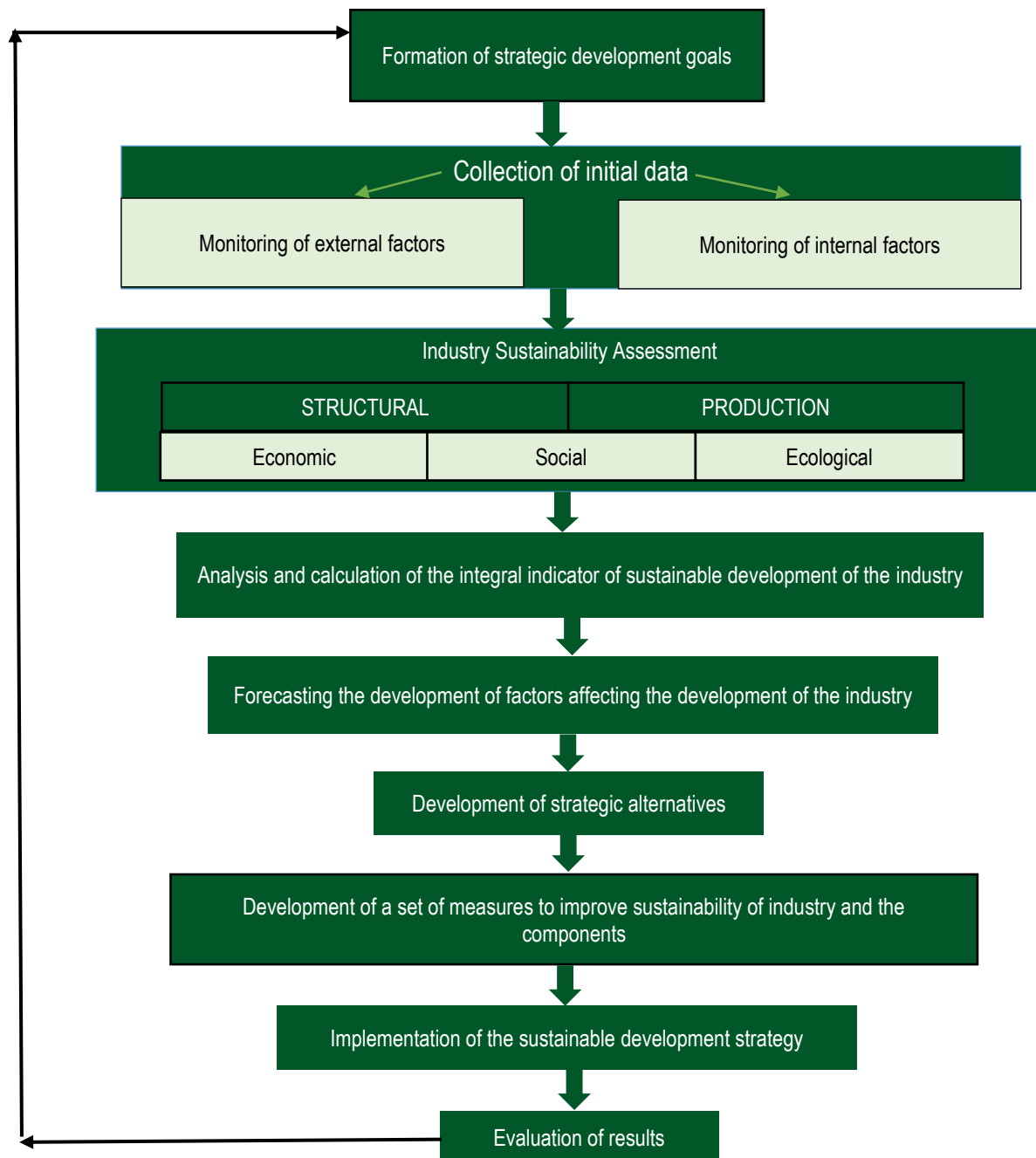
In our case $r_{yx1/x2} = 0.292$, communication density is low; $r_{yx2/x1} = -0.358$, the tightness of the connection is not strong. On the basis of partial coefficients, it can be concluded that the inclusion of variables in the regression model is justified. The multiple correlation coefficient can also be determined in terms of partial correlation coefficients:

$$R = \sqrt{1 - (1 - r_{yx1}^2) \cdot (1 - r_{yx2|x1}^2)} \quad 3.9$$

$$R = \sqrt{1 - (1 - 0.254^2) \cdot (1 - 0.358^2)} = 0.4289$$

Thus, the conducted correlation analysis indicates the presence of a weak relationship between the factors. Let us turn to the formation of an industry development strategy. According to the author, the process of forming a strategy for the sustainable development of light industry from the point of view of technology can be represented in the form of a flowchart or model (Figure 3), which summarizes the order and content of the stages of strategy development. To form a strategy for the sustainable development of the light industry, strategic goals that are relevant in a given time period are determined and a balanced scorecard is formed. To determine this goal, it is necessary to assess the impact of the strategy on the sustainable development of the industry. This implies a number of problems that need to be formalized by interconnecting economic and non-economic indicators, determining their actual and normative values, and also structuring the problems by building a tree of goals to solve them.

Figure 3. The process of developing a strategy for the sustainable development of light industry from the point of view of production technology



Source: compiled by authors

Initial data are collected considering possible changes in external and internal factors. Based on the collected information, an analysis and calculation of the integral indicator of the sustainability of the industry development is carried out.

At the next stage, a forecast is made for the development of factors influencing the development of the industry. When the causes are identified, you can begin to develop options for achieving your goals. For each problem, it is necessary to develop several alternative options, which will ensure high quality and efficiency of the future management decision.

A set of measures is being developed to improve the sustainability of the development of the industry and the components of the strategy. Strategic perspectives make it possible to single out industry strategies and increase the level of stability of their parameters due to internal reserves. For a qualitative assessment of the results of the development of the industry at certain stages of its implementation and the tasks set, constant monitoring of the industry is necessary, which will make it possible to give practical recommendations on the

implementation of the strategy for the sustainable development of light industry and confirm the viability of this methodology.

Considering the scale and depth of the problems, the sustainable development of light industry in Kazakhstan should be based on the modernization of industrial production through innovative industrial development, effective economic mechanisms and regulation, which can be ensured through the implementation of an effective industrial policy of the state, the role and importance of the state of light industry for Kazakhstan.

Conclusion

As a result of the analysis, it was revealed that ecotourism is dictated by the desire to reconnect with nature and more primitive ecosystems, learn about their value and understand what is necessary to protect them. To ensure that ecotourism fulfills its purpose, it is necessary to understand that all tourism activities have a minimal impact on the environment, that such development is welcomed by local communities, and that it contributes to stable and equitable economic development. Perhaps the advantage of ecotourism is the fact that it encourages both travelers and businesses working in the tourism industry to become more attentive to nature and more committed to adopting sustainable behaviors that can limit the damage caused by tourism activities. Also note that the benefits created by ecotourism may be unevenly distributed, which may increase inequality.

As projects aimed at maintaining and developing ecotourism, we can offer the following:

- creation of a volunteer movement in support of ecotourism;
- involvement of the leadership of local communities, communities in the development of ecotourism;
- informing tourists about unique places and compliance with certain rules of conduct, etc.

The socio-economic significance of light industry and its impact on ecotourism is determined by the fact that it is of great importance in providing employment for the able-bodied population, especially women, and has an impact on people's health. Accordingly, the modernization of production, the introduction of scientific developments is a necessary step in ensuring the success of the industry.

Based on the study, the following conclusions can be drawn:

- the problems of the development of light industry in Kazakhstan are systematized, including weak state support for the industry, the predominance of imports, a high degree of technical depreciation of fixed capital, etc. based on the study of foreign experience, the need for state support for the industry is substantiated;
- a methodology for assessing the sustainability of the development of the industry and its calculation on the example of the Kazakhstani light industry is proposed, which made it possible to identify the low investment and innovation activity of the industry as one of the main problems;
- based on the correlation-regression analysis, a model was constructed that determines the dependence of the industry's output on investment and innovation in the industry;
- a mechanism has been proposed for the formation and implementation of a strategy for the sustainable development of light industry in Kazakhstan, where the key link is given to state corporations.

In order to structure the management process of the light industry development strategy, it is necessary to group the methods of state regulation in accordance with the problems of the industry development, increasing their effectiveness.

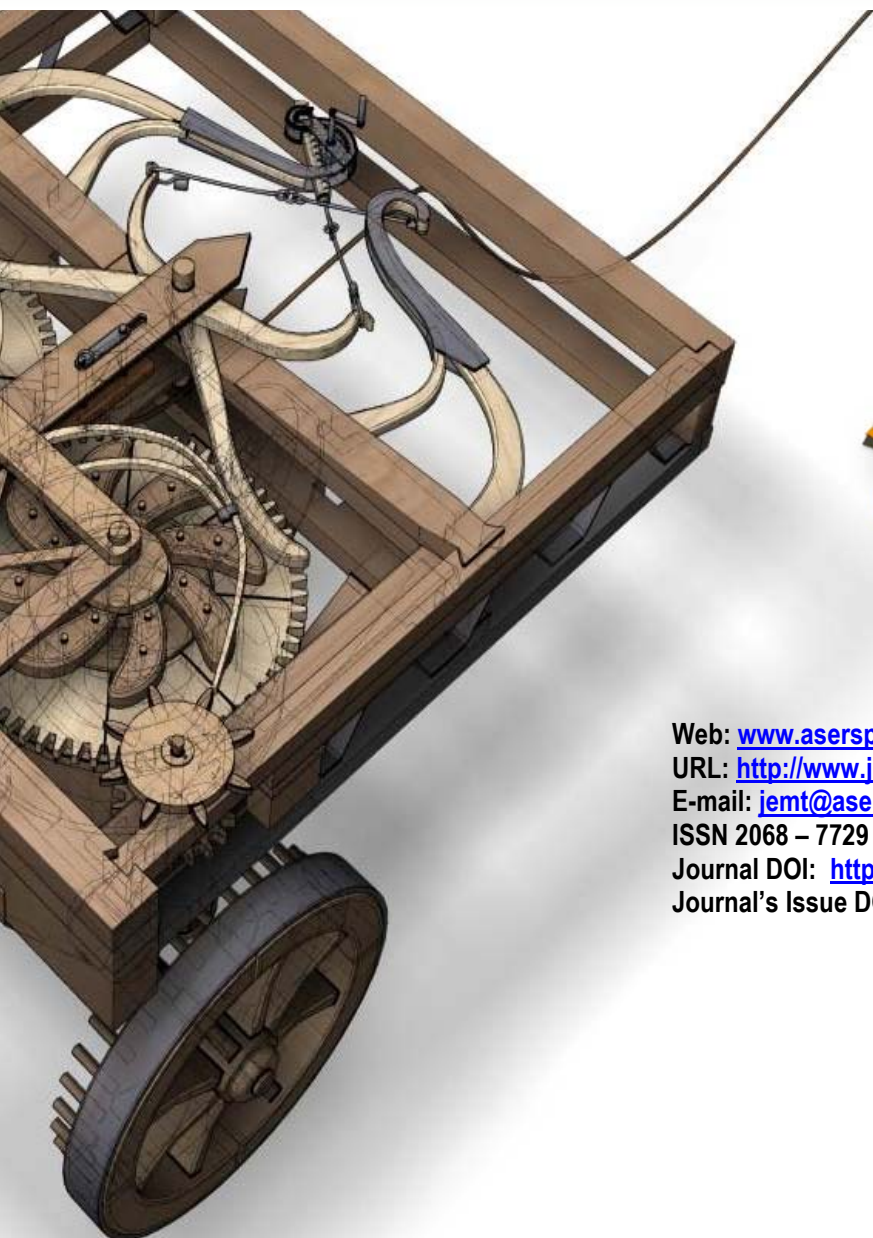
References

- [1] Ahmad, F., *et al.* 2018. Tourism and pollution: evidence from western China's One Belt, One Road (OBOR) Provinces. *Sustainability*, 10(10): 3520. DOI: <https://doi.org/10.3390/su10103520>
- [2] Blau, M. L., and Panagopoulos, T. 2022. Designing therapeutic destinations: a practical guide to eco-conscious tourism development. *Grounds*, 11: 1595. DOI: <https://doi.org/10.3390/land11091595>
- [3] Chien, F., *et al.* 2022. Does air pollution affect the U.S. tourism industry? Evidence from a quantum autoregressive distributed lagged approach. *Tourism Economics*. DOI: <https://doi.org/10.1177/13548166221097021>
- [4] Chiu, Y-T.H., Lee, W-I., and Chen, T-H. 2018. Environmentally responsible behavior in ecotourism: background and consequences. *Tourism Management*, 40: 321–329. DOI: <https://doi.org/10.1016/j.tourman.2017.06.013>

- [5] Cobbinah, P. B., Black, R., and Yanbini, N.N. 2021. The globalization of ecotourism: a policy analysis and expert perspectives. *Tourism Planning and Development*, 18(3): 314-339. DOI:<https://doi.org/10.1080/21568316.2020.1792>
- [6] Dulatbekov, N. 2022. Historical relations between Kazakhstan and Hungary and their impact on economic cooperation and development. New experiences and perspectives upon tourism, *Journal of Environmental Management and Tourism*, 13(6): 1584–1594. <https://journals.aserspublishing.eu/jemt/article/view/7271>
- [7] Gaderi, Z., and Henderson, J. K. 2018. Sustainable rural tourism in Iran: a view from the village of Hawraman. *Tourism Management Perspective*, 2: 47-54. DOI: <https://doi.org/10.1016/j.tmp.2017.03.001>
- [8] Hashemi, S. S., and Habibi, M. 2018. Zoning of ecotourism potentials. Case study: Sadeqabad, Bafq, Yazd. *Journal of Tourism Planning and Development*, 5(2): 41-50.
- [9] Iorio, M., and Corsale, A. 2020. Rural tourism and livelihood strategies in Romania. *Journal Rural Equestrian*, 26: 152-162. DOI: <https://doi.org/10.1016/j.jrurstud.2019.10.006>
- [10] Krasnikova, A. S., Melnikov, O. N., and Starozhuk, E. A. 2019. The mechanism of tactical and strategic coordination of the departments of industrial enterprises under diversification. *Russian Journal of Innovation Economics*, 9(4):1479-1488. DOI: <https://doi.org/10.18334/vinec.9.4.41324>
- [11] Lee, T. H., and Yang, F. H. 2019. Can community-based tourism contribute to sustainable development? Evidence from residents' perceptions of sustainability *Tourism Management*, 70: 368-380. DOI:<https://doi.org/10.1016/j.tourman.2018.09.003>
- [12] Muresan, I., et al. 2018. Local attitudes towards sustainable rural tourism development. *Sustainable Development*, 8: 100-109. DOI: <https://doi.org/10.3390/su8010100>
- [13] Ngai, E. T., Peng, S., Alexander, P., and Moon, K. L. 2018. Decision support and intelligent systems in the textile and apparel supply chain: An academic review of research articles. *Expert Systems with Applications*, 41(1): 81–91.
- [14] Ojogiva, O. T. 2021. The essence of strategic leadership for transformed public sector management in Nigeria. *International Journal of Business and Management Studies*, 13(1): 83-96. DOI:<https://orcid.org/0000-0003-1713-3144>
- [15] Omarova, A., et al. 2021. Analysis of the development of innovative activities of the tourism industry in the influence of pandemic, *Journal of Environmental Management and Tourism*, 12(6): 1442–1453. DOI:[https://doi.org/10.14505/jemt.v12.6\(54\).02](https://doi.org/10.14505/jemt.v12.6(54).02)
- [16] Phelan, A., Ruhanen, L., and Mair, J. 2020. An ecosystem-based approach to ecosystem services for community-based ecotourism: Towards a just and sustainable blue economy. *Journal of Sustainable Tourism*, 28(10): 1665-1685. DOI: <https://doi.org/10.1080/09669582.2020.1747475>
- [17] Roberts, L., Hall, D., and Morag, M. 2018. *New directions in rural tourism*. Routledge: Abingdon, 334 pp. ISBN: 978-1138250284. DOI: <https://doi.org/10.4324/9781315248097>
- [18] Shasha, Z. T., et al. 2020. Past, current and future perspectives of ecotourism: A bibliometric survey between 2001 and 2020. *Environmental Science and Pollution Research*, 27: 23514–23528. DOI:<https://doi.org/10.1007/s11356-020-08584-9>
- [19] Simay, K. H., and Deniz, N. 2020. Comparative advantage of textiles and clothing: Evidence for Bangladesh, China, Germany and Turkey. *Fibres and Textiles in Eastern Europe*, 21(1): 14–17.
- [20] Sobhani, P., et al. 2022. Analysing the relationship of local community participation in sustainable ecotourism development in protected areas, *Iran*, 11(10): 1871. DOI: <https://doi.org/10.3390/land11101871>
- [21] Tolepov, A., Tlesova, A., Moldasheva, A., Orynbasarova, Y., Saparova, B. 2022. Improving the innovative activity of the region with impact upon tourism. *Journal of Environmental Management and Tourism*, 13(6): 1728–1739. DOI: <https://journals.aserspublishing.eu/jemt/article/view/7284>
- [22] Torkington, K., Stanford, D., and Guiver, J. 2020. Discourse(s) of growth and sustainability in national tourism policy documents. *Journal of Sustainable Tourism*, 28(7): 1041-1062. DOI:<https://doi.org/10.1080/09669582.2020.1720695>

- [23] Wiersema, M. F., and Beck, J. B. 2018. Corporate or product diversification. *Oxford Research Encyclopedia of Business and Management*. DOI: <https://doi.org/10.1093/acrefore/9780190224851.013.14>
- [24] Xu, L., *et al.* 2020. What is more important, environmental protection or recreational service? Data from a selection experiment in wetland management. *Wetlands*, 40: 2381–2396. DOI: <https://doi.org/10.1007/s13157-020-01348-8>
- [25] Yee, J. H., *et al.* 2021. Socio-geographic assessment of ecosystem services in an ecotourism destination: A PGIS application in Trum Chim National Park. *Vietnam Journal of Environmental Management*, 291: 656-672. DOI: <https://doi.org/10.1016/j.jenvman.2021.112656>

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ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

Journal's Issue DOI: [https://doi.org/10.14505/jemt.v14.2\(66\).00](https://doi.org/10.14505/jemt.v14.2(66).00)