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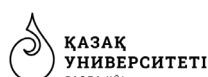
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FOREIGN EXPERIENCE IN REGULATING THE PUBLIC PROCUREMENT SYSTEM

The relevance of this research topic lies in the fact that public procurement requires in-depth consideration and comprehensive analysis, including the scientific and methodological level of analysis. The use of special legal documents in public procurement and the specific procedure for the execution of these documents is not a factor in the full understanding of this direction, including the economic assessment of the entire process. An economic and statistical approach using system analysis is required, which was used by the authors of the scientific article as the proposed research methodology.

One of the main parts of the progressive process of commodity exchange in the economies of the analyzed countries is the mechanism for building public procurement. Currently, the problem of material and technical support of public needs in developed countries is solved as a result of logistics processes in the system of public procurement through the acquisition and supply of goods, works, and services, tangible and intangible resources.

The article submits a review of foreign experience in building a public procurement system with special features characteristic of this region of the world, presented as an object of research. Country aspects in the object under study and allowed the authors to formulate the relevant main results and conclusions concerning various parties in the public procurement system, which determined the further strategy to improve the procurement system of the government and international integration union.

Key words: public procurement (PP), regulation of the public procurement system, government orders, entrepreneurship, international regional institutions, regulation of the public procurement system, procurement, USA, European Union (EU), Poland, Germany, World Bank.

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Мемлекеттік сатып алу жүйесін реттеудің шетелдік тәжірибесі

Ғылыми зерттеу жұмысы тақырыбының өзектілігі мемлекеттік сатып алуды ғылыми-әдістемелік деңгейімен бірге терең зерттеуді және жан-жақты талдауды қажет етеді. Мемлекеттік сатып алулардағы арнайы құқықтық құжаттардың қолданылуы және осы құжаттардың нақты орындалу тәртібі бүкіл процесті экономикалық бағалауды қамтитын аталған бағытты толық түсінудің факторы болып табылмайды. Ұсынылып отырған зерттеу әдіснамасы ретінде ғылыми мақала авторлары пайдаланған жүйелі талдауда қолданылатын экономика-статистикалық тәсілдің қажеттілігі айқындалды.

Талданатын елдердің экономикаларындағы тауар алмасудың үдемелі процесінің негізгі бөліктерінің бірі мемлекеттік сатып алу жүйесі болып табылады. Қазіргі уақытта дамыған елдердегі мемлекеттік қажеттіліктерді материалдық-техникалық қамтамасыз ету проблемасы тауарларды, жұмыстар мен көрсетілетін қызметтерді, материалдық және материалдық емес ресурстарды сатып алу және жеткізу жолымен мемлекеттік сатып алу жүйесіндегі логистикалық процестер нәтижесінде шешілуде.

Мақалада зерттеу объектісі ретінде әлемнің дамыған мемлекеттеріне тән ерекше белгілері бар мемлекеттік сатып алу жүйесін құрудың шетелдік тәжірибелеріне талдау жүргізілген. Зерттелетін объектідегі елдік аспектілер және авторларға мемлекеттік тапсырыс жүйесіндегі әр түрлі тараптарға қатысты тиісті негізгі нәтижелер мен қорытындыларды тұжырымдауға мүмкіндік берді, бұл өз кезегінде мемлекет пен халықаралық интеграциялық одақтың сатып алу қызметі жүйесін одан әрі дамыту стратегиясын айқындады.

Түйін сөздер: мемлекеттік сатып алу (МС), мемлекеттік сатып алу жүйесі, мемлекеттік тапсырыс, кәсіпкерлік, халықаралық аймақтық институттар, мемлекеттік сатып алу жүйесін реттеу, сатып алу, АҚШ, Еуропалық Одақ (ЕО), Польша, Германия, Дүниежүзілік банк.

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Зарубежный опыт регулирования системы государственных закупок

Актуальность данной темы исследовательской работы заключается в том, что государственные закупки требуют глубокого рассмотрения и всестороннего анализа, включая научно-методологический уровень анализа. Применение специальных правовых документов в государственных закупках и конкретный порядок исполнения этих документов не являются фактором полного понимания данного направления, включающего экономическую оценку всего процесса. Необходим экономико-статистический подход с использованием системного анализа, что и было использовано авторами научной статьи в качестве предлагаемой методологии исследования.

Одной из главных частей поступательного процесса товарообмена в экономиках анализируемых стран является система государственных закупок. В настоящее время проблема материально-технического обеспечения государственных нужд в развитых странах решается посредством логистических процессов в системе государственных закупок путем приобретения и поставки товаров, работ и услуг, материальных и нематериальных ресурсов.

В статье представлен анализ зарубежного опыта построения системы государственных закупок с особенными чертами, характерными регионам мира и международным интеграционным союзам, представленными как объект исследования. Региональные аспекты в изучаемом объекте и позволили авторам сформулировать соответствующие основные результаты и выводы, касательно различных сторон в системе госзаказа, что определили дальнейшую стратегию развития системы закупочной деятельности государства и международных интеграционных объединений.

Ключевые слова: государственные закупки (ГЗ), регулирование системы государственных закупок, государственный заказ, предпринимательство, международные региональные институты, регулирование системы государственных закупок, закупочная деятельность, США, Европейский союз (ЕС), Польша, Германия, Всемирный банк.

Introduction

The article comprehensively examines the problems of formation and development of public procurement on the main experience of foreign countries and international regional institutions, examines the specific aspects of the formation and placement of public procurement, characteristic of this region of the world.

So, taking into account the example of the PP mechanism of the United States of America (USA), it is noted that this country has the greatest experience in regulating public procurement for the following reasons: of all the developed countries in modern globalization, the US government is the customer of goods and services in order to meet its own needs; the main argument for this is the budget expenditures of a third of the state's government, etc.

The German public procurement system has the most interesting experience in the field of public procurement among European countries. Its peculiarity is that the basis of the EU legislation on public procurement is German legislation.

Sources of public procurement coverage in Germany, as in other developed countries, produce

various types of funds. These include funds received from the income of special funds of state budgets and extra-budgetary funds, state or regional budgets, from the own activities of state structures, as well as tax and other types of income.

As for this system in Poland, this region of the world is a symbiosis of multilateral cooperation between representatives of various spheres of public and public life. Joint efforts in the Polish public procurement system are aimed at solving common socio-economic problems, and thus are open to all participants in the public procurement system. This situation determines the presence of a partnership that does not have opposing interests and strategies.

As this system in EU states is strictly defined and is aimed at further improving the regulatory framework. This system will solve current issues: delete from the action of the common law, the traditional natural monopoly in PP in certain sectors of the economy; to implement procurement practices more effective treatments; to establish a framework agreement; to introduce new forms of organization of accounting of e-procurement.

The above-mentioned and analyzed by the authors of the article key aspects of the PP system are

consistent with international practices, as well as international integration union, are accompanied by conclusions that take into account the strategy of their further development.

Literature review

At the present stage of the development of world science, there are a number of studies related to the regulation of this system. Among such studies, one can distinguish foreign and domestic scientific works in the form of published scientific articles, monographs, textbooks, state programs and legal reports.

Such foreign scientists devoted their research to problematic issues of public procurement, as Aoyagi M., Zielińska A., Prudzienica M., Lysons K., Gillingham M., Lanzillotti R.F., McAfee R., McMillan J., Porter R.H., Zona J.D., Panshin B.N., Pokrovskaya V.V., Uskova E.A., Andreeva A., Khramkin A., Antonov V.I., Kiselev O.V. [Aoyagi M., 2000; Zielińska A., Prudzienica M., Mukhtar E., Mukhtarova K., 2016; Lysons K., Gillingham M., 2005; Lanzillotti R.F., 2000; McAfee R., McMillan J., 1992; Porter R.H., Zona J.D., 1999; Khramkin A., 2020; Panshin B. N., 2016; Andreeva A., 2006; Antonov V.I., Kiseleva O.V., 2013; Pokrovskaya V.V., Uskova E.A., 2008] and others.

Among the kazakh authors, the most significant are scientific articles and fundamental research by Mukash S., Mukhtar E.S., Baymukhametova D. Zh., Ospanova D.A., Smagulova A.B., Amirova M.A. [Mukash S., 2013; Mukhtar E.S., 2017; Baymukhametova D.Zh., 2009; Ospanova D.A., 2016; Smagulova A.B., Amirova M.A., 2016] and others, whose works are associated with problematic issues of state orders in the international, country aspect and specific sectors of the economy.

Materials and methods

The scientific article is based on the scientific theories of domestic and foreign authors on public procurement issues, conclusions were drawn on the current situation in the public procurement system on the example of some governments of the world.

The methodology of the study is based on the use of a systematic approach and system analysis, scientific and theoretical, informational material of an economic and legal nature, including the works of foreign and kazakh scientists-experts, key provisions from economic and legal documents.

In the presented research the authors used the policy documents of national importance, the materials of official statistics, monographic works and

reports of international experts, findings of methodological studies [Public procurement system: towards a new quality, 2016; The Great silk road 2015; The public procurement system as a living organism, 2016; quarterly report of Eurasian Bank of development and reconstruction, 2017; the UNCITRAL Model Law on international commercial arbitration, 2016; the agreement on the Eurasian Economic Union, 2017; Budget of the USA Government report, 2016; USA Federal Contract System 2016; Act on procurement of federal property and services, 2016; Federal Acquisition Regulation, 2016; Polish Economy, 2016], etc.

As an information base in the article, the materials of the web portal of public procurement of foreign countries, industry-specific foreign scientific and methodological materials, information, search engines posted on the global Internet were used.

During the research, such methods as tools of marketing research, logical, economic-statistical, comparative, system analysis were used [Vukolov E.A., 2008; Web gantry of public procurement of the Republic of Kazakhstan, 2017; Debreu G., 2008] and etc.

Discussion and results

This research paper presents foreign experience in regulating the public procurement system on the example of EU countries, Poland, Germany, USA, and other regions of the world. In that way, in the United States, the Federal Contract System (FCS), which includes more than 160 thousand commercial organizations, there is a system in place to meet government needs delivery of goods, works, and services for state needs. Practically 12.5% of the total working-age population of the United States (about 17 million people) are employed in the field of public procurement.

The initial law United States to regulate the FCS was adopted in 1792, reportedly which the main powers and work in the field of public procurement in order to meet public needs vested ministries like the Ministry of Defense and the Ministry of Economy. The crisis of the Great Depression, which occurred in the 1930s, revived the named system, as thanks to this, the main point of development of FCS. During these years, the government of Franklin Delano Roosevelt was looking to get out of the crisis of the 30s of the 20th century, which shook the provisions of the order capitalist system. The mechanism of indirect state regulation of the economy was built into the free market economy, and the state sector of the economy was created. The State assumed

the function of producing public goods, taking care of pensions, sickness benefits, and unemployment. The ideas of the English economist John Keynes made creative use of the experience of state regulation accumulated by Western countries during the First World War, and the experience of Soviet Russia in building an economy based on command socialism was implemented by President Roosevelt in the course of the new treaty policy. Subsequently, this model was implemented in Europe [US Federal Contract System, 2016].

Thus, with the adoption of the 1949 Law on Federal procurement of goods and for the provision of services legislative framework FCS began to form in the mid-twentieth century [the Law on Federal procurement of goods and services, 2016]. In 1994, the US Federal Customs Service legislation underwent a major revision, since it did not sufficiently reflect the rapidly increasing importance of purchasing products for state needs at that time. The appearance of the Law on the Improvement of Federal Procurement, which was the result of its verification, was transformed into the modernization of the entire FCS, which mainly focused on information policy, another point is the formation and use of the information base above-mentioned system. Organizational issues related to public procurement procedures were also analyzed (by 1994, there were 889 general regulations). Now the federal bodies authorized to deal with public procurement have been given greater independence in the choice of methods and forms of supply for public needs.

The legislation has significantly simplified the procedure for concluding contracts for small purchases, but at the same time supporting e-commerce. By the way, the term «e-commerce» refers to electronic technologies for business support, including e-mail, electronic bulletin boards, payment cards, the Internet, money transfers, remote data exchange, and the like [US Federal Contract System, 2016].

The most interesting is the real practical application of the state order planning procedure of the United States. Documents on government orders are prepared by every government customer in the United States. Preliminary procurement forecast and preparation of an individual public procurement plan basically, these two stages make up the US FCS planning system (see figure 1).

The placement of government orders assumes a forecast of purchases and currently determines the schedule of the channel. This schedule includes the schedules of some federal executive authorities, as well as government customers for some regions. The

creation and disclosure of integrated information is the key task of the forecast of public procurement in the authorities on the planned volumes of public procurement.

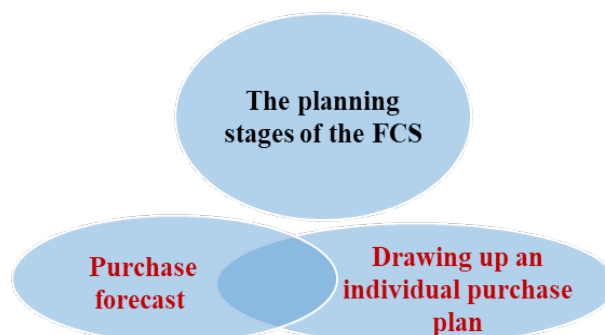


Figure 1 – FCS Planning Systems of US*

* Note: compiled by the authors

The schedule or plan of state orders by state customers at the level of some regions, the procurement forecast currently contains information about some federal executive authorities. Each method of planning future purchases individually American practice is modeling the item in each period from the moment of emergence of needs for goods, works (services) prior to the preparation of the contract, the supply of these goods (works, services) until the moment of acceptance [Antonov V.I., Kiseleva O. V., 2013].

Thus, the USA has the greatest experience in regulating the public procurement system. Thus, the largest consumer of special goods and services to meet the needs of this state is the US government among the developed countries. The Federal Budget for Public Procurement is a body that accounts for a third of its total expenditures; the Government of the country is by far the world's largest buyer. The annual volume of supply contracts for fiscal 2016 exceeded 500 billion USD and accounted for more than 16.5 % of total government spending.

The expenditure portion of government contracts is shown in the following figure [US Government Budget Report, 2016] (see figure 2).

All the listed documents must comply with the unified rules for federal special needs. FAR (Defense Federal Acquisition Regulations Supplement – DFARS) is regulated and regulated by the terms of procurement for state defense needs through a special application. Norms and rules, requirements close to 4300 thousand, regulate in detail the single cycle of planning, placement, and execution of the state order by these rules [Federal Acquisition Regulation, 2016].

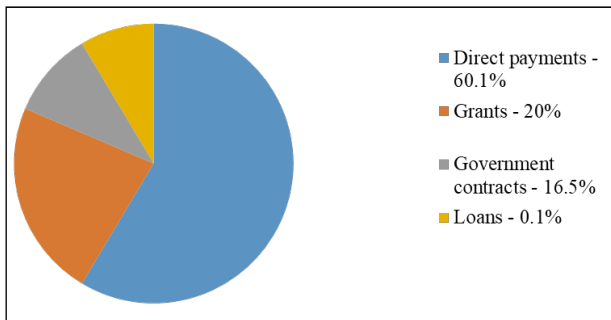


Figure 2 – The points cost of the US Federal Government 2016*
 *Note: compiled by the authors
 [USA Government Budget Report, 2016]

General principles that form laws general principles and requirements that form laws federal law does not regulate the procurement of states, counties, and municipalities, but only establishes local procurement laws. However, the process of unifying local procurement laws has not been successful: only a few states have fully brought their legislation into line with federal laws.

However, the US federal procurement information system provides information on 400-500 thousand contracts with a unit value of more than 25 thousand US dollars. Federal agencies annually conclude 17 million contracts with a small unit value and a total value of about 200 billion US dollars. In other words, the source of information about the PP is the central federal procurement information system (Federal Regulations on Procurement, 2006). Thus, each US federal agency requires the preparation and maintenance of a computer database that contains non-secret information about all contracts for 5 to five financial years. The total cost of information exceeds more than 25 thousand US dollars. All departments are included in the information structure of the central federal public procurement authority. As for the federal agencies, they use unified data formats and standard forms of documents in their main activities in order to provide contract information. In addition to the mandatory list of documents requires agencies to have electronic data that can identify subcontractors under contracts, which is generally measured at a total of 5 million US dollars or more [Antonov V.I., Kiseleva O.V., 2013].

It is used in the mechanism for providing public procurement in the United States in order to collect information about the planning of multi-level spreadsheets that are available to external observers. Conditions that allow tracking public procurement plans can be implemented prior to bidding in this in-

formation system. The following data is available in the informed system according to the system used in the US practice: the person responsible for each contract, the government authorities, each purchase in terms of the price range, the form of the contract, and its implementation. American practice models the stages of individual planning from the moment when the need for goods, works, or services arises to the introduction of each future purchase into the contract and the acceptance of the delivered products, works, and services [Mukhtar E.S., 2017].

At least three vendors are sending requests for purchase offer requests. The criteria for evaluating the received proposals, the subject matter, and the procedure for their application in the evaluation are determined by the customer independently. The criteria and requirements established by the supplier of the goods are established based on the management and technical characteristics of the suppliers of the goods. Among the most effective are recommendations that solve a particular problem. Among them, we also find the following: include the prices the costs of operation, repair, and maintenance services make up the composition. Acceptable cases include a list of events in which, in the event of a request for proposals, there are opportunities and conditions for negotiating or reviewing and reviewing the customer's proposals.

These negotiations are distinguished by the fact that they are conducted confidentially. However, the parties may, at their discretion, participate in all candidates who have submitted their proposals, as well as in rejected proposals. After everything is completed, the parties will decide on the provision of services to suppliers with options for the final product on a certain date specified in the contract. In the process of selecting products, the best quality is selected from them (see figure 3).

In the USA public procurement system, as in the European Union, there are *open and closed one-and two-stage tenders*, requests for quotations, and purchases from a single source, which are well known to us from the domestic practice of public procurement [Mukhtar E.S., 2017].

So, when placing a US government order to comply with FAR, such processes as open bidding, two-stage bidding, negotiation, and simplified procurement methods are also applied.

Simplified acquisition methods this type of contract is not found in other countries, the amount in the contract is small (should not exceed 100 thousand US dollars), also the annual cost is 5 million US dollars. At the same time, a ban on the artificial splitting of the purchase volume is imposed.

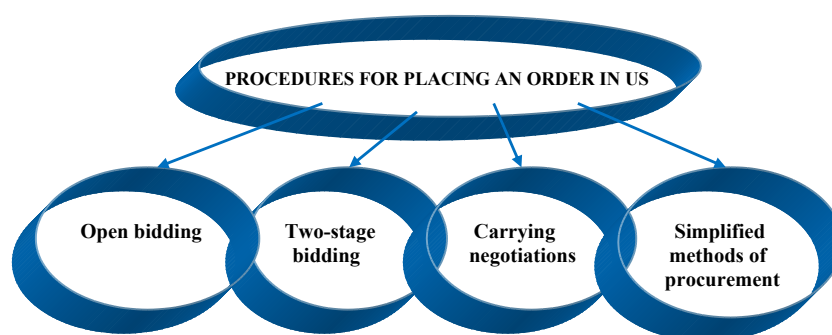


Figure 3 – Current order placement procedures in the USA*

* Note: compiled by the authors according to the information 2019-2020.

Simplified methods include:

- a) request for price quotes (Price Quotations);
- b) use of corporate purchasing plastic cards for particularly small purchases – up to 2500 US dollars (Governmental wide Commercial Purchasing Card);
- c) placing purchase orders (Purchase Orders);
- d) the use of framework treaties (Blanket Purchase Agreement) in order to regular purchases of a wide range of products (a typical example is a stationery and other consumables for office work, as well as the supply of spare parts for customers' car farms) and others [Khrankin A., 2020].

The formation and placement of US government orders are carried out two main guidelines: the name of a specific state body in order to meet the current needs (logistics) of activities and purchases in accordance with the profile of the work (primarily research and development work and organization of design work – research work and development work, accordingly, as well as capital investments).

Special government regulations are used to account for national defense and security procurement in the United States. This type of state order is placed on the basis of a special document – an addendum to the set of rules for public procurement for the necessities of domestic defense (Defense Federal Acquisition Regulation – Supplement, DFARS). Present guidance is applied by the US the Committee of Defense and other agencies when purchasing products exclusively for military purposes.

Issues of current support for the needs of US federal authorities are solved centrally, through a special organization – the General Services Administration (GSA). Regardless of the profile of the divisions, it is possible to purchase a wide range of goods, works, and services by so-called “single standard” customers. Side as the administration, state customers are offered a choice of more than 4 million types of products for the centralized purchase of general services.

In these circumstances, reducing the cost of GSA procurement procedures is one of the essential effective tasks. Thus, GSA expenditures on procurement in 2002 amounted to 2.07% of the total expenditures on procurement, between 2004 and 2005 decreased to 1.75% [Khrankin A., 2020].

Unification of procurement rules and procedures into a single system of standards is of great importance. Currently, European countries are gradually adjusting their legislation and legal acts based on the content of the EU directives. European countries with rich reasoning in the field of control over the placing orders for state needs are in the hands of Germany. At the same time, EU public procurement is obtained on the basis of German legislation in the field of public procurement. [Mukhtar E.S., 2017].

Germany is obliged to comply with the European legislation on public procurement as a member of the European Union. In the field of creating a competitive environment and the absence of any discrimination, German legislation on public procurement meets the requirements of the EU. From the legislation of the Federal Republic of Germany, it follows that the section of the law on the prevention of restrictions on competition (antitrust law) is borrowed from the European Constitution regulating public procurement. According to the authors, in order to fulfill all the necessary urgent needs of the state, it must consider as a principle of functioning of the market economy [Antonov V. I., Kiseleva O. V., 2013].

Respond the demands of the EU, the structure of monitor of public procurement techniques in Germany has its own particular characteristics, comprise of two levels:

- in the format of a separate independent structure-the court of appeal;
- in the form of a judicial body – a judicial instance.

As good news in Germany, the possibility of challenging the results of placing an order in court is considered. Decisions in the form of verdicts and procedures approved by the two instances are published they serve to further develop the openness of public procurement. The law establishes an accelerated procedure for reviewing complaints about the actions of the customer. In this case, the cancellation of the decision to adopt and maintain a state order under legislative acts does not entail a delay in spending budget funds and purchasing products in order to compensate for the needs of the government within its framework.

The contract is mainly concluded with participants who are cost-effective and efficient only as a result of trading. The decline in prices as a result of the auction explains the economic success of Germany in the purchase of the cheapest goods, works, and services. Buying quality products at an affordable price explains the economic benefit. However, in accordance with the principle of open competition, all suppliers are identified when submitting an application. [Antonov V.I., Kiseleva O.V., 2013].

The activities of a public special institution of experts and scientists called the “Public Procurement Forum” in Germany are one of the ways to ensure providing control over the distribution of public orders. One of the main functions of such a forum is the exchange of views and building a new course on the process of public procurement both at home and abroad.

Resolutions of the Forum and reviewer viewpoints are socialized to the state. The Forum by year rewards the Public Procurement Award for effective research work in the area of public procurement. At this stage, Germany is controlled by the order of PP regulated by the requirements of the EU, however, it has special features (see figure 4):

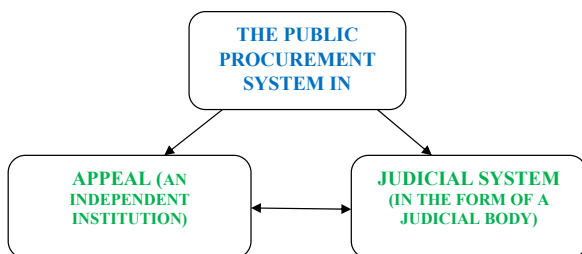


Figure 4 – German model of public procurement system*

*Note: compiled by the authors

The capability to refute the placement of a government order in a court of law in Germany turns out to be a productive innovative approach. The decision to cancel the placement of the state order is that

an accelerated procedure for considering complaints against the actions of the Customer specified in the specified legal act is established, which does not exclude delays in spending budget funds and purchasing goods government agency the needs of the government.

Results in the form of verdicts and procedures approved by the authorities are published in the social domain. These new requirements contribute to the further development of the purchasing system. As in most developed European countries, in Germany, the costs of public procurement are covered by the state or these include extra-budgetary funds, as well as other sources of income, regional budgets formed at the expense of income related to activities of state structures (see figure 5):

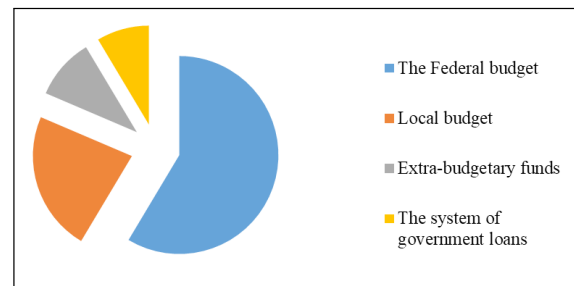


Figure 5 – Sources of PP formation in Germany*

* Note: compiled by the authors

Of particular importance is public procurement in the country played by the rule of free-market competition in the employment of citizens, provide an important impact on the regional strategic policy of the distribution of public procurement on the territorial aspects of specific states. This fact is to seek out an expression in the fact that national companies have the pre-emptive right to conclude state contracts [Mukhtar E.S., 2017].

As noted by a doctor of Economics, Professor Higher School of Economics (Moscow) Pokrovskaya V.V. and consultant of the Ministry of the economy of the Moscow region Uskova E.A., the above principle on the market of the state order of Germany, like other European countries is due to the existing discriminatory preferences, i.e. the way unequal access to mastering procurement from funding their public authority in respect of non-resident companies.

The customer's preference for national enterprises is based on such factors as the German mental principle, the absence of a language barrier, and developed Germany, among the European developed countries. Also meets the European rules and requirements in the field of employee remuneration,

trade in goods, indexation of utility tariffs, the safety of use of products and goods, public health, and environmental protection. There are certain restrictions that are associated with the need to comply with national and state security, regulation and supervision of the national economy within the state can also become an obstacle to participation in PP that supply foreign goods. Among the discriminatory measures can also be attributed requests and conditions of state order arising from technical specifications and focused only on national standards, which in turn are an insurmountable barrier for foreign manufacturers [Pokrovskaya V.V., Uskova E.A., 2008].

Meanwhile, some interest is attracted by the logistics of public procurement in Poland, which is due to such factors as an interesting geographical location and huge potential.

Thus, a country like Poland is washed by the Baltic Sea in the north; borders with:

- Czech Republic in the south-west part – 790 (615) km,
- Slovakia in the south part -539 (420) km,
- Ukraine in the south-east part – 529 (428) km,
- Germany in the western part – 467 (456) km,
- Belarus in the east part – 416 (605) km,
- Russia (Kaliningrad region) in the north-east part – 206 (210) km,
- Lithuania in the north-east part – 103 (91) km,

The country borders the regions of Denmark and Sweden through an economic zone in the Baltic Sea. The overall distance of the verges is 3582 km, incorporate 3054 (2888) km of land and 528 (491) km of sea borders [Economy of Poland, 2016].

That is, Poland, being in the center of Europe, acts as a transport corridor between Belarus and Germany and is used by many transport companies for the active transportation of various goods from the EU to the countries of the Eurasian Economic Union.

The public procurement mechanism in Poland is characterized by multilateral cooperation between representatives of various spheres of public and public life. In 2002, an Information Center of the Civil Service was established in Poland, the task of which is to expand the admittance of conventional residents and government servants themselves to reference the kinds of community services, regions of activeness of independent government bodies and departments, and others. [Ospanova D.A., 2016].

These partnerships can be initiated both for business entities operating on a non-profit basis in non-governmental organizations, and in public institutions that operate at the local, regional, national, or even international level.

The very idea of partnership convinces and activates as many diverse objects as possible, which increases the chance of developing strong ties and realizing many social goals, in particular, in the fulfillment of which the rule of partnership is of paramount importance. Due to this, the public procurement mechanism is characterized by joint efforts (actions), government people in the economic sector are equal parties. They combine their efforts to solve common socio-economic problems, thereby being open to all participants in the public procurement system and thus, this partnership does not have opposing interests and development strategies [Zielińska A., Prudzienica M., Mukhtar E., Mukhtarova K., 2016].

If we regard a number of rules and methods of conducting public procurement for World Bank projects, then the experience of purchasing goods and services according to various criteria is very important. The main justification for determining the winner when purchasing goods and works for the project within the framework of the World Bank is the price criterion that meets all technical requirements. The fundamental fact criterion for the purchase of services is quality, not price, which is the main difference from the purchase of goods and works.

The significance of the share of government purchases and a large number of member countries defined by different levels of development and capacity of the public sector demanded a specific legislative attitude to the regulation of state procurement in the European Union. State orders are regulated by law at three levels-as laws on state orders, depending on the conditions, the volume of public procurement, and other requirements for their placement within the framework of international legislation of the European Union and within the framework of national legislation [Mukhtar E. S., 2017].

An agreement on public procurement was concluded within the scope of the World Trade Organization (WTO) was concluded in connection with the international procurement settlement of the European Union. For a number of state needs that provide for uniform conditions, legal acts are provided at the level of regulation to the extent of the European Union. In this case, the transition period is taken as 2004-2006. During this year, it identified 2 types of documents: “old” and “new” directives with an improved form.

The priority direction of fundamental changes in regulation 100 of the public procurement process of the member states of the European Union is the further improvement of the regulatory framework:

- the need to exclude from the scope of use of the general legislation the course of public procurement of traditionally existing natural monopolies in certain sectors of the economy (including in the field of energy, water supply, transport and postal services);

- in the framework of national procurement, signing of the most effective framework agreements and procedures that include competitive negotiations;

- registration of innovative business models, including concessions and certain forms of partnership between the private and public sectors, in the effective organization of business);

- introduction of the electronic format in the procurement system [Khramkin A., 2020].

Along with the tool for implementing social policy, the EU provides for the satisfaction of the current activities of public procurement authorities. For example, the official report entitled "Legislation of the European Congregation in the field of public procurement and the use of public procurement for community policy states that it is necessary to take into account social aspects when signing contracts for the supply of goods for national needs. It should be noted here that legal practice and the designation of the scope coverage implementation from the point of view of the implementation of social programs are possible.

Within the framework of public procurement, there are basic approaches to the issue of conducting social activities, which are as follows:

- the establishment of conditions, including technical ones, when meeting the requirements related to labor standards;

- effective approach to choosing a supplier;

- the application of sanctions for the dismissal of those service providers who do not adhere to the proper requirements of the legislation in the social direction;

- preparation and implementation of auxiliary social characteristics when selecting suppliers.

This document examines the application of environmental policy in the allocation of national orders, namely:

- development and formulation of various required technological procedures and technical features;

- analysis and selection of suppliers, as well as the necessary types of raw materials and materials that meet special requirements of the tender documentation;

- analysis and evaluation of the proposals received as a result of the discussion, and the choice of an effective and economically important proposal that takes into account environmental requirements.

In accordance with national legislation, purchases of EU member states are made by public administration bodies.

Though in this situation, we are not talking about government procurement requirements of the state, the legislation and recommendations of the European Community established in the directives mentioned earlier, as a case that should be taken into account [Khramkin5 A., 2020].

Conclusion

In the article, the authors attempt to consider the practice of managing the public procurement system in foreign countries, such as the USA, Germany, and Poland, within the European Union, which have many years of experience in regulating the public procurement system, while highlighting the efficiency of the most important and specific aspect of the arrangement of public procurement.

Referring to the experience of countries with a developed public procurement management system, the following conclusions can be drawn, since the public procurement system has become the main party to the progressive exchange of goods in the economies of international institutions and the analyzed countries. As a rule, the issue of logistics for public needs in developed countries is solved by purchasing the necessary material and non-material resources, goods, works, and services through various logistics processes in the public procurement system.

1. As mentioned earlier, US law has a number of features, such as the definition of equal rights between the customer and the contractor in the performance of a government contract, but the pre-emptive right of the customer to unilaterally refuse the order. However, the authors of this study are particularly interested in the American methods of individual planning of public procurement and ways of conducting the procurement system will be considered, as well as a request for proposals on ways to improve the regulation of processes in this area.

2. At the same time, take part in the judicial framework in the field of public procurement is of no less important attention, and, therefore, the condition for expedited consideration of claims against the actions of the shopper. An example is the practice of Germany, where the cancellation of a decision to place a state order does not lead to a delay in spending budget funds and acquisition goods for government necessities. At the same time, decisions in the form of the decisions adopted by both instances are published in the public domain. This, in turn, will al-

low us to further develop and improve the device of state procurement.

3. On the example of Poland, the implementation of transport and transit transport projects will allow further development of the mechanism of public procurement related to in the end can ensure the country's competitiveness in the world market, which further stimulates the growth of cargo transportation volumes. All this can be achieved by improving the level of transport infrastructure and developing the competitiveness of carriers in the foreign market, as well as through the effective use of transit potential.

4. If we regard a number of rules and methods of conducting public procurement for World Bank projects, then the experience of purchasing goods and services according to various criteria is very important. The main justification for determining the winner when purchasing goods and works for the project within the framework of the World Bank is

the price criterion that meets all technical requirements. The bottom line is that the main criterion for the purchase of services is quality, not price, which is the main difference from the purchase of goods and works.

5. State orders are regulated by law at three levels-as laws on state orders, depending on the conditions, the volume of public procurement, and other requirements for their placement within the framework of international legislation of the European Union and within the framework of national legislation [Mukhtar E. S., 2017].

An agreement on public procurement was concluded to the extent of the World Trade Organization (WTO) was concluded in connection with the international procurement settlement of the European Union. For a number of state needs that provide for uniform conditions, legal acts are provided at the level of regulation at the level of the European Union.

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THE APPLICATION OF FOREIGN METHODS OF INCREASING THE EFFICIENCY OF PUBLIC TRANSPORT IN THE SYSTEM OF STATE GOVERNANCE OF THE REPUBLIC OF KAZAKHSTAN

Within the framework of the public administration system effectiveness in the provision of services to the population, the authors consider topical issues of improving the quality of the work of such a social sector as public transport. It is noted that the state reform of public transport demonstrates high efficiency in implementing a set of tasks (development of digitalization of the industry, renovation of transport parks, etc.). However, in the field of transport services, there are still open meta related to the need to optimize their practical activities.

An important point in the study is the analysis of the features in assessing the degree of satisfaction with transport services consumers. These features are largely due to the quality of the driver himself, who is the subject of providing services to vehicle users, and the key role of passengers who are able to objectively assess the work of social services.

The article discusses various methods of increasing efficiency, including in the field of transport management. The Kazakhstani experience of research and application of these and other approaches to improving the efficiency of public transport management is considered.

Having considered this practice, it is proposed to introduce an assessment of the satisfaction of public transport passengers; to implement the research objectives, the authors proposed a methodology based on the results of a survey of the population in an online format. In the presence of an integrated mobile application, this methodology will make it possible to introduce an estimated indicator of passenger satisfaction with completed trips.

The result of these measures should be an improvement in the quality of services provided by public transport, which, in turn, will stimulate the abandonment of private vehicles in favor of public ones, significantly improve the environmental situation in the city, and also be able to relieve the traffic of city streets during almost all working hours.

In the context of the state program for the implementation of the "smart" urban transport project, the maximum optimization of the existing system and the achievement of the ultimate goal of ensuring comfortable and safe travel by public transport is possible.

Key words: public administration, efficiency, key performance indicators, KPI system, KPI system algorithm, customer satisfaction, efficiency assessment, quality of services to the population, social work.

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Қазақстан Республикасының мемлекеттік басқару жүйесінде қоғамдық көліктің тиімділігін арттырудың шетелдік әдістерін қолдану

Халыққа қызмет көрсету саласындағы мемлекеттік басқару жүйесінің тиімділігі шеңберінде авторлар қоғамдық көлік сияқты әлеуметтік саланың жұмыс сапасын арттырудың өзекті мәселелерін қарастырады. Қоғамдық көліктің мемлекеттік реформасы міндеттер кешенін іске асыру бойынша жоғары тиімділікті көрсетеді (саланы цифрландыруды дамыту, көлік парктерін жаңарту және т.б.). Алайда, көлік қызметтері сала-сында олардың практикалық қызметін оңтайландыру қажеттілігіне байланысты әлі де ашық мета бар.

Зерттеудің маңызды сәті көлік қызметтерін тұтынушылардың қанағаттану дәрежесін бағалау кезіндегі ерекшеліктерді талдау болып табылады. Бұл ерекшеліктер көбінесе көлік құралын пайдаланушыларға қызмет көрсету субъектісі болып табылатын жүргізушінің жұмысының сапасына, сондай-ақ әлеуметтік қызметтердің жұмысын объективті бағалай алатын жолаушылардың негізгі рөліне байланысты.

Мақалада тиімділікті арттырудың әртүрлі әдістері, соның ішінде көлік менеджменті саласындағы әдістер қарастырылады. Қоғамдық көлік саласындағы басқарудың тиімділігін арттыруға осы және басқа да тәсілдерді зерттеу мен қолданудың қазақстандық тәжірибесі зерттелді.

Осы тәжірибені қарастырып, қоғамдық көлік жолаушыларының қанағаттанушылығын бағалауды енгізу ұсынылады; зерттеу міндеттерін іске асыру үшін авторлар онлайн форматта халыққа сауалнама нәтижелеріне негізделген әдістеме ұсынды. Интеграцияланған мобильді қосымша болған жағдайда, бұл әдістеме жолаушыларға жасалған сапарларға қанағаттанудың бағалау көрсеткішін енгізуге мүмкіндік береді.

Осы іс-шаралардың нәтижесі қоғамдық көлікпен көрсетілетін қызметтердің сапасын арттыру болуы тиіс, бұл өз кезегінде жеке автокөліктен қоғамдық көліктің пайдасына бас тартуды ынталандыруға, қаладағы экологиялық жағдайды едәуір жақсартуға мүмкіндік береді, сондай-ақ барлық жұмыс сағаттарында қала көшелерінің трафигін жеңілдетуге қабілетті.

«Ақылды» қалалық көлік жобасын іске асырудың мемлекеттік бағдарламасы аясында қолданыстағы жүйені барынша оңтайландыру және қоғамдық көлікте ыңғайлы және қауіпсіз сапарларды қамтамасыз етудің түпкі мақсатына қол жеткізу мүмкін болады.

Түйін сөздер: мемлекеттік басқару, тиімділік, тиімділіктің негізгі көрсеткіштері, KPI жүйесі, KPI жүйесінің алгоритмі, тұтынушылардың қанағаттануы, тиімділікті бағалау, халыққа қызмет көрсету сапасы, әлеуметтік жұмыс.

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Применение зарубежных методов повышения эффективности общественного транспорта в системе государственного управления Республики Казахстан

В рамках эффективности системы государственного управления в сфере оказания услуг населению авторами рассматриваются актуальные вопросы повышения качества работы такой социальной отрасли, как общественный транспорт. Отмечается, что государственная реформа общественного транспорта демонстрирует высокую эффективность по реализации комплекса задач (развитие цифровизации отрасли, обновления транспортных парков и др.). Однако, в сфере транспортных услуг существуют ещё открытые мета, связанные с необходимостью оптимизации в их практической деятельности.

Важным моментом в исследовании является анализ особенностей при оценке степени удовлетворенности потребителями транспортных услуг. Эти особенности в большей степени обусловлены качеством работы самого водителя, являющегося субъектом предоставления услуг пользователям транспортного средства, так и ключевой ролью пассажиров, способных объективно оценивать работу социальных служб.

В статье рассматриваются различные методики повышения эффективности, в том числе в сфере транспортного менеджмента. Рассмотрен казахстанский опыт исследования и применения этих и других подходов к повышению эффективности управления в сфере общественного транспорта.

Рассмотрев данную практику, предлагается внедрить оценку удовлетворенности пассажиров общественного транспорта; для реализации задач исследования авторами предложена методика, основанная на результатах опроса населения в онлайн-формате. При наличии интегрированного мобильного приложения данная методика позволит иметь возможность внедрения оценочного показателя удовлетворенности пассажирами совершенных поездок.

Результатом данных мероприятий должно стать повышение качества предоставляемых услуг общественным транспортом, что, в свою очередь, позволит стимулировать отказ от личного автотранспорта в пользу общественного, в значительной мере улучшить экологическую ситуацию в городе, а также разгрузить трафик городских улиц практически во все рабочие часы.

В контексте государственной программы реализации проекта «умного» городского транспорта возможна максимальная оптимизация существующей системы и достижение конечной цели по обеспечению комфортных и безопасных поездок на общественном транспорте.

Ключевые слова: государственное управление, эффективность, ключевые показатели эффективности, система KPI, алгоритм системы KPI, удовлетворенность потребителей, оценка эффективности, качество услуг населению, социальная работа.

Introduction

Key performance indicators in the public transport sector are in many countries – it is one of the important performance indicators for public transport companies. Western management science has a long history of creating and using performance indicators in management concepts - starting with the system of indicators of the French scientist J.L. Little (Tableau de bord), developed in 1932 (Malo JL, 1995) and including the famous management system by objectives Management by Objectives (MBO) by Peter Drucker (Drucker P., 2007), an integral part of which are indicators (indicators) and ending a real boom in the idea of developing indicators in the 90s of the twentieth century.

One of the earliest systems for measuring performance was the French tableaubord system. At present, the modern concept of tableaubord has been formed, which French authors Yves Chiapello and Michel Lebas (Chiapello E., 2001) define as a management tool used to «select, document and interpret» causally linked financial and non-financial indicators. Each indicator reflects the state of a certain part of the business that needs to be managed; thus, in the aggregate, tableaubord is, as it were, a general model for the functioning of a business as a system.

According to the results of studies conducted in the United States and cited in the book by M. Armstrong and A. Baron (Armstrong, M. & Baron, A., 1998), internal performance parameters are critical to monitoring the implementation of the plan and the mutual integration of all components of business activities.

In the Kazakh system of public administration, this system has also been introduced using advanced experience and the work of an expert group. This tool is most effective for monitoring and improving the levels of public transport services.

In the field of public transport, government plans and strategies are in force. All of them are aimed at the implementation of a qualitative reform of the public transport system, the main among them are the following activities:

- Kazakhstan has developed a long-term Development Strategy until 2050, in which the transport sector is among key infrastructure components;
- Master plans for urban development have been developed, which include the transport sector;
- The Strategy for Sustainable Development of Public Transport for Almaty is an important step for evaluation of public transport potential as component of urban development (Strategy for Sustainable Transport, 2013);

- Focus on the introduction of differentiated tariffs;

- A new standard contract for the provision of public transport services has been developed

So, in Almaty in 2016-2019, 1,113 new buses were purchased, the country's first Bus Rapid Transit (BRT) line was launched, car sharing and bicycle rental services were introduced. The construction of two new metro stations and the implementation of the Light Rail Tram (LRT) project are ongoing.

Today the bus fleet of Almaty has already been renewed by 80%. This became possible, among other things, thanks to the implementation of the Onay card payment system, which allowed to take funds away from shadow circulation. Today, 97% of all transactions are carried out by bank transfer. The possibility of paying for travel by means of a QR code is gaining popularity among the population.

The result of the BRT implementation is an increase in passenger traffic by 40%, as well as a reduction in travel time by 15 minutes. According to the Police Department, in January-April 2019, the number of road accidents decreased by 24% (The bus fleet of Almaty, 2019).

In recent years, a number of innovations have been introduced in the public transport system of the city of Almaty: the launch of an electronic payment system, launch of public transport lanes, a differentiated fare, etc.

All this, of course, gives grounds to talk about the high-quality implementation of the public transport reform, however, moving on to performance indicators, one should pay attention to their usefulness and the involvement of the main consumers of services in quality assessments to obtain a more objective picture.

Literature review

KPI is a key performance indicator that can be quantified and is considered the most important for assessing the performance of any structural organization (Vishnyakova M.V., 2017)

In modern foreign literature, there are different formulations of this indicator, such as “metrics”, “performance indicators”, “key results indicators - KRIs”, “key success factors” (“Critical success factors - CSF”). Different authors give different meanings to the terms. Thus, David Parmenter, author of *Key Performance Indicators: Developing, Implementing and Using* (David Parmenter, 2010), delineates the terms of performance indicators as follows: - “key results indicators - KRIs” show what actions are needed commit to improve performance in the

long run, - “performance indicators” show what the daily functions are needed, - “key performance indicators (KPIs)” show what needs to be done to leapfrog efficiency.

In order to avoid any problems with understanding this concept, the wording prescribed in the ISO 9000: 2018 standard has been developed. In the existing standard, the concept of “performance” is divided into two directions. The first is performance, that is, it characterizes the organization’s ability to pursue results orientation. The second is efficiency, that is, it implies a correlation between the result obtained by the organization and the costs incurred in the process of achieving the set goals, for a certain period of time (Quality management, 2018)

Another source of shaping the modern view of performance measurement is Peter Drucker’s theory of management by goals. This scientist emphasized the need for a dashboard in business. In 1954, outlining his concept of Management by Objectives (MBO), he wrote: “Targets in key areas [of business] are the” dashboard “necessary for the” pilot “of a business enterprise” (Drucker P., 2007) Interestingly, in fact, already in the 50s of the 20th century, Peter Drucker formulated the main provisions of efficiency assessment systems, the boom of which will take place in the United States in the 90s of the twentieth century, and these ideas will come to Russia at the beginning of the twenty-first century in the form of the Balanced Scorecard of Norton and Kaplan (Kaplan RS, 1996).

It was this system that became the most popular in our country and thanks to it, not only the term Balanced Scorecard (BSC) came into the practice of domestic management, but also used in the West in other systems. The most popular term is Key Performance Indicators (KPI). But there is an opinion, expressed, in particular, by K. Redchenko, that if in P. Drucker’s system the goals are replaced by indicators to which goals are set, then in fact you get the BSC system (Redchenko K.I., 2002).

Another well-known performance-based methodology is the Balanced Scorecard system, described in books by Robert Kaplan, David Norton, their followers, and numerous articles. The authors generalized the ideas of management by goals and combined indicators according to certain principles. But the popularity of their methodology all over the world is mainly due to the fact that they paid much attention to the applied aspects of implementing the system. This system is known as a balanced scorecard - BSC. According to the BSC, data on indicators are collected and analyzed in 4 aspects:

1. The client aspect answers the question of what organizations our clients see. The following main criterion applies here: if the requirements of clients are not fully satisfied, then they have to look for other organizations that are ready to provide them with such an opportunity. The BSC requires leaders in the organization to translate the overall customer intent into concrete metrics that reflect the factors that truly matter to customers. Decrease in the level of the organization’s indicators in this direction is a clear indicator of the future decline of the enterprise, even if the current financial picture of its functioning is quite safe.

2. The aspect of internal processes answers the question of how organizations should improve. The high quality of the organization’s work for clients is the result of decisions made in the company and the processes occurring within it. This aspect of the BSC allows managers to evaluate the work of their company precisely from this, internal, point of view, shows how well the procedures are performed that allow them to receive high quality products and services provided.

3. The renewal and learning aspect addresses the question of whether organizations can continue to add value and create value. An organization’s ability to improve and learn helps it penetrate new markets and increase revenues and profits. Growing and developing can only be a company that is able to continually bring new products to the market, create new value for consumers and improve its efficiency.

4. The financial aspect answers the question of what kind of organization the shareholders see. Financial performance reflects the impact of the company’s strategy on increasing profits. According to the authors of the BSC, the task of processing and maintaining financial data, as a rule, is given even more attention than is necessary. Therefore, they talk about the need for a balance of indicators for all 4 aspects. All of these performance assessment systems involve the creation of a hierarchy of goals, where the main thing is the implementation of the strategy, which is cascaded to departments by creating indicators. In this case, the main task is to timely verify the achievement of goals for each of the KPIs with a strategic goal. These figures are even compared to navigation instruments that indicate the location of the company (ship) on the way to the target.

Materials and methods

Key performance indicators provide and aim to:

- understanding of public transport services, modal separation and an acceptable public transport system.

- Improved travel efficiency and / or increased passenger traffic.
- Improved access to public transport for all levels of the population.
- Improving the quality of services provided.
- Increased security level.
- Ensuring the financial stability of the system.
- Improving the financial and operational management of the company.

Best practice studies of Key Performance Indicators (KPIs) have shown that there are about 400 indicators of different categories that can be applied in the public transport sector, which are currently considered in the transport industry (Ohingra, 2011), such as:

- Availability of public transport;
- Provision of services;
- The impact and contribution of public transport to society;
- Travel time;
- Security and safety;
- Maintenance and construction.

The design and definition of KPIs can be at different levels, depending on what performance is to be measured and why. Comprehensive sources of

information on KPIs for public transport, such as the Transit Cooperative Research Program report, indicate that operational metrics can be derived from both transport performance assessment and transport planning (TCRP, 2010).

The authors of the study reviewed the analysis of the international bus benchmarking group, which used 35 KPIs to monitor 6 categories: service quality, asset utilization, efficiency, environmental performance, and financing. According to the benchmarking approach, the main KPIs should be grouped into the following categories:

1. Financial;
2. The level of passenger satisfaction;
3. Security level;
4. Operational efficiency (Review of the development policy of the public transport sector, 2017)

Thus, all available KPIs for public transport were considered, a short list of indicators was prepared that could be useful for analyzing and improving the state of public transport in Kazakhstan. Having studied examples of best practice KPIs, as well as familiarized with different methods, while combining these two approaches, a table with their description was prepared (see Table 1):

Table 1 – Recommended KPIs for assessing the operational performance of public transport services and contributions to the national transport statistics database *

№	Basic KPI	Operational KPIs for the level of public transport service delivery
1	Security and safety: on the roads and in the vehicle interior	1. Degree of accidents (injured, fatal, property damage only) per 10.000 km; 2. Degree of crime per 100,000 km (by category of victims: passengers, personnel of bus vehicles, owners of public transport organizations); 3. Number of formal security checks at stops / stations and inside the vehicle; 4. Perceived safety assessment.
2	Legal Indicators: Basic Requirements Vehicle Operation To Determine KPI Selection	Number and type of local government level for public transport regulation.
3	Performance indicators: to measure reliability, quantify demand for public transport use	1. Km of the vehicle; 2. Frequency of service provision; 3. Vehicle operating hours; 4. Percentage of planned vehicle for service delivery; 5. Average age of the vehicle; 6. Breakdown rate; 7. Number of days of staff training and number of courses
4	Quality services for passengers: perceived and actual comfort, availability of services and information	1. Punctuality (% of scheduled services); 2. Cleanliness and comfort at stops and inside the vehicle; 3. The level of user awareness during the operation of the vehicle following the schedule and unforeseen circumstances; 4. Professionalism of drivers / staff (knowledge, service orientation, arrival time, driving style); 5. Number of low-floor vehicles (more comfortable access for people with disabilities).

No	Basic KPI	Operational KPIs for the level of public transport service delivery
5	Economic / Financial Indicators: Public Transport Utilization and Performance	<ol style="list-style-type: none"> 1. Passenger traffic (by age; type of tickets, route); 2. The cost of labor for a bus and / or per km (driver, mechanic, conductor, administrative staff); 3. Cost recovery ratio (travel income (ticket sales) divided by total costs); 4. Travel revenue per passenger; 5. Maintenance costs; 6. Use of human resources (cost of personnel per income / km); 7. Frequency of absenteeism of staff.
6	Environment: vehicle standard, vehicle service during business hours, emissions, noise	<ol style="list-style-type: none"> 1. Average age of the vehicle; 2. The number of vehicles with low exhaust emissions; 3. Number of vehicles powered by dual system technology (hybrid); 4. Number of vehicles using high quality fuel standard (Euro 4; Euro 5); 5. The number of electric vehicles; 6. Total length of the electrified network (in km)

* Note: compiled on the basis of data from (Review of the development policy of the public transport sector, 2017).

The list in the table is not exhaustive and is not considered a comprehensive plan for the implementation of KPIs, but serves as the first step to consider the possibility of using a KPI system and to further discussions on its implementation.

When analyzing the efficiency of public transport in the public administration of the country, both qualitative and quantitative methods of analysis were used, during which such methods were applied as:

- marketing research - a survey of the population of the city of Almaty was carried out;
- system analysis - an overview of performance indicators was made, a specialized matrix of KPIs for a public transport driver was developed with reference to the goals of public transport, indicating the weights and calculation indicators
- comparative analysis - an analysis of Yandex Taxi performance indicators is presented, recommendations for the implementation of end-to-end accounting for one of the key efficiency factors "Passenger Satisfaction" in the KPI matrix of a public transport driver are proposed.

The online survey was conducted among Almaty residents aged 18-55 using the Google Forms platform from November 15 to December 15, 2020. The sample consisted of 1036 people, the survey consisted of 6 questions, among which were questions of both open and closed types.

The sociological research program included questions about preferences in the choice of public transport modes, the degree of satisfaction with public transport services, the assignment of an assessment to the work of public transport drivers, as well as online methods of assessing public transport services.

During the survey, the following results were obtained:

- 60.7% of respondents use bus services;
- 50% of respondents value the most affordable fare;
- 32.1% of respondents note the strongest advantage of public transport - a separate lane;
- 50% of the respondents gave the rating "3" out of "5" public transport drivers work quality, 35.7% rated it "4" out of "5".

Thus, the survey revealed preferences in the use of public transport services, in which there is an increase in loyalty, although there are drawbacks, while preferences were also determined for the methods of online platforms for assessing passenger satisfaction.

Evaluation of KPI performance takes place in special tables - "KPI Matrices". In Western companies, this form is sometimes called "Agreement on goals" + "Production contract". The table got this name because matrix analysis and comparison of many data (indicator weight and range of values) is carried out (Klochov A.K., 2010).

When developing the KPI Matrix for a public transport driver by the authors, the following provisions were taken into account:

- All indicators are measurable.
- Used both qualitative and quantitative indicators.
- As all the goals of the lower management level are achieved, the main strategic goal in the designated period is achieved automatically.
- 5-7 key indicators (of any type) are selected to assess the results and competencies of the employee in the coming month and are recorded in a personal performance table. At the same time, competencies

are equated with the qualitative results of the employee's activity.

- Each of the selected indicators, in accordance with the priorities of the direct supervisor,

is assigned a weight - from 0 to 1 (the total weight should be 1).

Below is the "KPI Matrix" of a public transport driver (see Table 2):

Table 2 – KPI matrix of public transport driver*

Goal	KPI name	KPI weight, %	KPI Bonus, %
Reduce the number of accidents involving public transport	Safety	30	$S \cdot 0.3 \cdot K1$
Provide optimal vehicle utilization rate	Punctuality of services on schedule	20	$S \cdot 0.3 \cdot K2$
Increase the number of passenger traffic	Passenger Satisfaction	30	$S \cdot 0.3 \cdot K3$
Improve the quality of services provided	Compliance with labor discipline	20	$S \cdot 0.3 \cdot K4$
Total		100	Bonus

* Note: compiled by the authors

The Bonus is calculated as follows (see Formula 1):

$$\text{Bonus} = S \cdot 0.3 \cdot (K1 \cdot 0.3 + K2 \cdot 0.2 + K3 \cdot 0.3 + K4 \cdot 0.2), \quad (1)$$

where: S – base salary;

0.3 – the amount of the bonus from the base of official salary;

K1, K2, K3, K4 – KPI performance ratio (determined by calculation at the end of the quarter)

0.3; 0.2; 0.3; 0.2 – share of each KPI.

It is worth to note that after the organization has implemented and operates a system for assessing the effectiveness of KPIs, it is necessary to conduct regular monitoring of the implementation, maintain feedback for a possible revision of KPIs, since over time the strategy should be revised in connection with the constantly changing environment of the organization. Control is implemented for each KPI perspective, taking into account the fact that the results in terms of one perspective can be influenced by facts that took place in another perspective. Depending on the degree of discrepancy between the planned and actual results, the strategy should be adjusted and, accordingly, KPIs.

Discussion and Results

In recent years, a number of innovations have been introduced in the public transport system of the

city of Almaty: the launch of an electronic payment system, launch of public transport lanes, a differentiated fare, etc.

The authors conducted an online survey to find out how consumers of services assess the reforms carried out in this area.

As it turned out, the most preferred type of public transport is bus 60.7%, 14.3% of passengers use the metro, 7.1% - trolleybus. At the same time, 17.9% do not use public transport at all (see Fig. 1).

The respondents note the following positive changes: the introduction of an electronic payment system (28%), an improvement in the technical condition of transport and the emergence of more modern buses / trolleybuses (25%), an increase in the service culture (9%). According to Almaty residents, travel time has decreased due to the introduction of dedicated lanes (8%), new routes have appeared (7%), the number of cars on the route has increased (6%).

Despite the ongoing reforms, there are still a number of problems that need to be addressed. The respondents, first of all, complain about the low level of driver culture (35%). Also, passengers are outraged by the driver's violation of traffic rules (23%), long waiting times for the bus at a bus stop (22%), non-compliance with the traffic schedule (15%). In addition, respondents note that they have to drive in a dirty (19%) and overcrowded (13%) passenger compartment. The respondents are annoyed by the driver's smoking (5%) and long travel time due to traffic jams (5%).

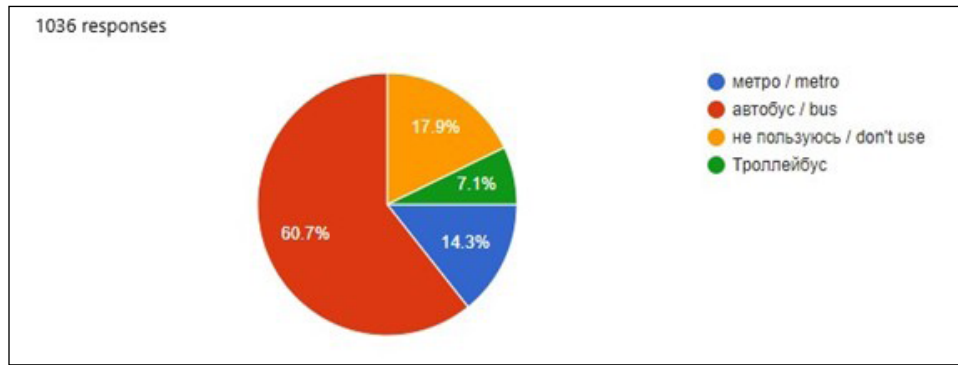


Figure 1 – Survey data on preferences in choosing the type of public transport (compiled by the authors)

These results lead to the following conclusions:

- Reforms of the public transport system are perceived positively by consumers of services, they are effective and provide an improvement in the quality of services.

- However, the level of culture of drivers and safety, depending on the driving style of drivers today, are the factors that remain to be brought in line with the expectations of consumers of services to increase loyalty, as well as compliance and increase passenger turnover.

- The cameras implemented to date inside public transport are not always the defining incentive for the provision of quality services by drivers in compliance with the rules and regulations for the implementation of public transport services.

- An alternative assessment of the quality of the driver's work is needed, namely, an online assessment of passenger satisfaction for each trip made, which will allow this indicator to be taken into account in the driver's monthly remuneration.

Thus, referring to the KPI matrix of the public transport driver and passenger satisfaction proposed by the authors, as one of the key performance indicators, it is necessary to note the share of this indicator in 30% and the need to measure it in a qualitative way that could be measured, evaluated, compared. In this regard, it is proposed to consider the experience of Yandex Taxi in this area.

Today Yandex taxi is one of the most popular services for ordering taxi rides. To improve the quality of passenger service, this company introduced the possibility of rating drivers.

After the passenger is delivered to his destination, he has the right to rate the trip in his application with a number from 1 to 5. This allows the taxi driver to earn a certain rating, which is valid for 2 months. The overall rating of a Yandex taxi driver

is made up of the number of stars that he scored in 2 months and the results of the test, which is conducted by the service itself (Evaluation and rating of the driver, 2019).

The increase in high ratings directly affects the number of orders. It is important to ensure that the overall rating does not fall below 4, as this will automatically block the taxi driver and cannot fulfill orders. It can only be unlocked after 2 months, when low marks will be replaced by new ones.

The assessment of customer satisfaction with a trip includes a large number of factors, among which the main ones are:

- Car delivery at the marked place;
- Travel speed;
- Optimality of the chosen route;
- Compliance with traffic rules;
- Vehicle condition;
- Personal qualities of the driver;
- Driver behavior, etc.

The rating includes every customer rating left after the trip. The marks for 2 months of work are summed up, and the final figure is divided by 60, the result is the driver's rating. At the same time, if the final score exceeded 4.8, the driver has the opportunity to receive the «Premium» status, which will open access to a larger number of orders.

If the taxi driver is a beginner, then he is given 30 ratings of 4.2 points. During the first month of work, these grades are replaced by those that are given to him by passengers.

If the driver has a large number of low ratings - below «4», a lock is made, which is not removed until 2 months. At this time, he cannot accept and fulfill orders. But the blocking can be removed by passing the test in the Yandex Taxi Center. Taking an exam is one way to improve your ranking. If the examinee received 4 (four) on the exam, then it is equivalent

to 20 excellent marks that he can receive for orders (Evaluation and rating of the driver, 2019).

The motivational essence of the rating also lies in the fact that if the client has given an excellent or good mark within half an hour after the trip, the driver is automatically tipped.

If this did not happen within the specified time period, the tip will be written off within 24 hours after the trip. Tips are awarded only if the client does not lower the grade. Yandex Taxi recently updated the screen in the application, adding fixed tips in rubles for the convenience of the passenger.

The Yandex taxi application system also provides a way of intangible incentives for the driver - with the help of a so-called compliment. This could be a separate grade for politeness, ride comfort, or even music. Such indicators are also taken into account in the overall rating of the driver (Evaluation and rating of the driver, 2019).

Having considered this practice, it is proposed to introduce an assessment of the satisfaction of public transport passengers for each driver according to the proposed indicators (see Table 3):

Table 3 – Indicators for assessing passenger satisfaction with the work of a public transport driver*

№	Passenger Satisfaction Indicators	Description of indicators	Passenger rating
1	Following a schedule	According to CityBus online timetable systems, metro; Stops in the right place; Stops for the prescribed amount of time	From 1 to 5, where 1 is bad, 5 is excellent
2	Driving style	Smooth safe driving; Safe embarkation and disembarkation of passengers; Safe driving, excluding people falling in the vehicle due to sudden braking, turns.	
3	Driver communication culture	Respectful communication of the driver with passengers, road users, if necessary, excluding abusive expressions, proceedings, assault.	
4	Compliance with driving rules and regulations	Traffic laws Following the traffic laws; Driver's non-smoking in the cabin; Preventing the driver from talking on the cell phone while driving	
5	Driver's appearance	Working uniform Neat look Sober state	
6	Automatic announcement of stops	Constantly turned on stop announcement system; The absence of strong distracting music during the announcement of stops.	

* Note: compiled by the authors.

At the same time, in the presented survey, it is proposed to use one of the following suggested an-

swer options as an online platform for recording estimates (see Figure 2):

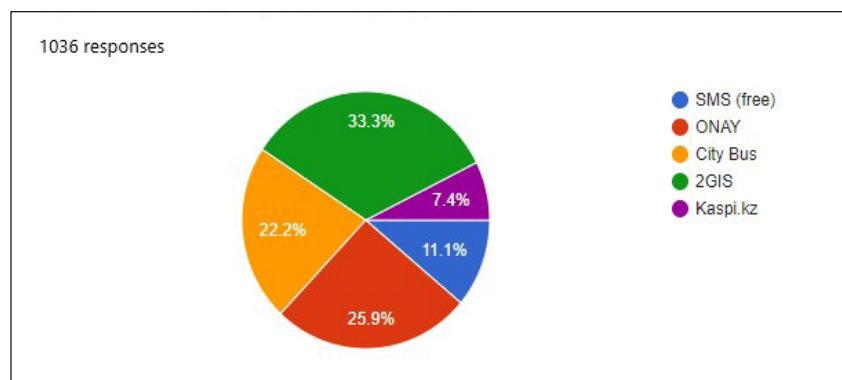


Figure 2 – Results of a survey on the preferred online platform for assessing job satisfaction for a public transport driver *

* Note: compiled by the authors

Thus, the majority of respondents (33.3%) noted 2GIS as the most convenient platform, which offers the construction of optimal public transport routes with indication of travel time. This platform has the most advanced functionality, where you can evaluate the constructed route, however, it is not integrated with the city public transport system so that it is possible to identify the numbers of vehicles and drivers.

The second place (25.9%) by the respondents was given to the ONAY system. Taking into account the fact that according to the Almaty transport holding for 2019, 97% of passengers pay for travel with the ONAY card (Investment attractiveness of the public transport sector, 2019), this survey result is not surprising. However, the ONAY system is provided to a greater extent for paying for travel, replenishing a card account, i.e. an integrated system is also not provided.

CityBus owns 22.2% of the votes, which allows tracking the movement of public transport. However, this system also lacks full functionality.

In this regard, it is advisable to mention the experience of the Smart Aqkol project within the framework of the State Program "Digital Kazakhstan" for the implementation of the concepts of "smart cities" in the country (Smart) (Smart city model Smart Aqkol, 2019). Within the framework of this project, it was planned to launch a single mobile application for all cities. In it, passengers should be able to find out the optimal route to the destination point, the actual movement of a particular bus on the map, and make a payment for the fare, i.e. combine the functionality of the top three survey leaders.

Thus, the presence of such an integrated mobile application will make it possible to implement an estimated indicator of passenger satisfaction with travel. The final goal of these events, of course, should be to improve the quality of services provided by public transport, namely: to increase the comfort and safety of public transport for passengers. This, in turn, will stimulate the abandonment of private

vehicles in favor of public ones, which will significantly improve the environmental situation in the city and relieve traffic in the streets in the morning and evening hours.

Conclusion

Much attention is paid to the issues of increasing the efficiency of public transport within the framework of the state reform. The public administration system provides for an integrated approach based on effective issues of digitalization, park renewal, and an integrated approach. The launch of an electronic payment system, the introduction of dedicated lanes for the movement of public transport, a differentiated fare for travel, a complete renewal of the bus fleets in Almaty, the KPI system was introduced.

In this study, the authors considered a system of key indicators of public transport performance and proposed optimization of the assessment methodology with the inclusion of such an indicator as passenger satisfaction in the online system. It is proposed to give this indicator one of the largest weights in the KPI matrix of each driver. It is assumed that the introduction of this indicator can improve the comfort and safety of public transport passengers.

The implemented methods of viewing the passenger compartment through the installation of cameras cannot always be analyzed and digitized, and also taken into account in the KPI system that affects the motivation and remuneration of drivers.

It is proposed to evaluate the passenger satisfaction indicator within the framework of an online platform that combines the functionality of existing ones.

The implementation of the smart urban transport project in this context can optimize the existing system to the maximum and contributes to the achievement of the final goal of ensuring comfortable and safe travel by public transport.

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DEVELOPMENT OF CHINESE-KAZAKHSTAN TRADE IN AGRICULTURAL PRODUCTS WITHIN THE FRAMEWORK OF «ONE BELT, ONE WAY»: FEATURES, FORMS OF COOPERATION AND PERSPECTIVES

The «One Belt, One Road» policy has brought economic and trade relations between China and Kazakhstan closer in the field of agricultural products, adding new opportunities for development, and the volume of trade has become stable and growing. Bilateral trade between China and Kazakhstan has shown new positive dynamics, where a unified trade structure is also noted.

There are great development prospects in the field of agricultural products of the two countries. In this regard, the author points to a mega-project called the Belt and Road Initiative, which focuses on the current situation and characteristics of Sino-Kazakh agricultural trade.

The article indicates some problems in the bilateral cooperation of the two states. Among these problems, the most important are noted. For example, the author notes that the situation with a large number of trade barriers prevents more Chinese and Kazakh enterprises from entering the market.

As a starting point based on an analysis of the obstacles facing the development of bilateral agricultural trade, countermeasures should be taken to further deepen bilateral cooperation in agricultural trade. A set of proposals to mitigate the problems of economic cooperation between Kazakhstan and China are offered in the conclusion of the article.

Key words: trade and economic cooperation, agrarian complex, dynamics of agricultural production growth, trade volume, trade turnover, trade barriers, RK, PRC.

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“Бір белдеу, бір жол” тұжырымдамасы шеңберінде ауыл шаруашылығы өнімдерінің Қытай-Қазақстан саудасын дамыту: ерекшеліктері, ынтымақтастық нысандары және перспективалары

“Бір белдеу, бір жол” саясаты даму үшін жаңа мүмкіндіктер қоса отырып, Қытай мен Қазақстан арасындағы ауыл шаруашылығы өнімдері саласындағы экономикалық және сауда қатынастарын жақындатты, ал сауда көлемі тұрақты әрі өсіп келеді. Қытай мен Қазақстан арасындағы екіжақты сауда Жаңа оң динамиканы көрсетті, онда да бірыңғай сауда құрылымы байқалады.

Екі елдің ауыл шаруашылығы өнімдері саласында дамудың үлкен перспективалары бар. Осыған байланысты мақала авторы “Бір белдеу, бір жол” бастамасы деп аталатын мега-жобаға назар аударады, ол қазіргі жағдайға және Қытай-Қазақстан ауылшаруашылық саудасының сипаттамаларына назар аударады.

Мақалада екі мемлекеттің екіжақты ынтымақтастығындағы кейбір проблемалар көрсетілген. Осы проблемалардың ішінде ең маңыздылары атап өтіледі. Мысалы, автор сауда кедергілерінің көптігімен байланысты жағдай нарыққа қытайлық және қазақстандық кәсіпорындардың көптеп шығуына кедергі келтіретінін атап өтті.

Ауыл шаруашылығы өнімдерінің екі жақты саудасын дамыту алдында тұрған кедергілерді талдауға негізделген бастапқы нүкте ретінде ауыл шаруашылығы өнімдерінің саудасы саласындағы екі жақты ынтымақтастықты одан әрі тереңдету үшін қарсы шаралар қабылдануы тиіс. Қазақстан мен Қытай арасындағы экономикалық ынтымақтастық мәселелерін жеңілдету бойынша ұсыныстар жиынтығы мақала қорытындысында ұсынылады.

Түйін сөздер: сауда-экономикалық ынтымақтастық, аграрлық кешен, ауыл шаруашылығы өнімінің өсу серпіні, сауда көлемі, тауар айналымы, сауда кедергілері, ҚР, ҚХР.

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**Развитие китайско-казахстанской торговли
сельскохозяйственной продукцией в рамках концепции «Один пояс, один путь»:
особенности, формы сотрудничества и перспективы**

Политика «Один пояс, один путь» сблизила экономические и торговые отношения между Китаем и Казахстаном в области сельскохозяйственной продукции, добавив новые возможности для развития, а объем торговли стал стабильным и растущим. Двусторонняя торговля между Китаем и Казахстаном продемонстрировала новую позитивную динамику, где также отмечается единая структура торговли.

В области сельскохозяйственной продукции двух стран существуют большие перспективы развития. В этом отношении автор статьи указывает на мега-проект, называемый Инициативой «Один пояс, один путь», который фокусируется на текущей ситуации и характеристиках китайско-казахстанской торговли сельскохозяйственной продукцией.

В статье указаны некоторые проблемы в двухстороннем сотрудничестве двух государств. Среди этих проблем отмечаются наиболее важные. Так, например, автор отмечает, что ситуация с большим количеством торговых барьеров препятствует выходу на рынок большего числа китайских и казахстанских предприятий.

В качестве отправной точки, основанной на анализе препятствий, стоящих перед развитием двусторонней торговли сельскохозяйственной продукцией, должны быть приняты контрмеры для дальнейшего углубления двустороннего сотрудничества в области торговли сельскохозяйственной продукцией. Ряд предложений по смягчению проблем экономического сотрудничества между Казахстаном и Китаем предлагается в заключении статьи.

Ключевые слова: торгово-экономическое сотрудничество, аграрный комплекс, динамика роста сельскохозяйственной продукции, объем торговли, товарооборот, торговые барьеры, РК, КНР.

Introduction

Kazakhstan is the first stop on the ancient Silk Road. In 2013, Chinese President Xi Jinping first proposed the Belt and Road Initiative during his visit to Nazarbaev University in Kazakhstan (Astana). Over the past seven years, the Sino-Kazakh economic and trade cooperation has demonstrated high development dynamics and potential. So, in 2019, the volume of bilateral trade between Kazakhstan and China exceeded 20 billion US dollars.

The question of how to effectively use the dividends of the “One Belt, One Road” policy, gradually removing barriers to trade in agricultural products between the two sides, effectively release the potential for trade development and effectively increase the level of trade in agricultural products between the two countries is an urgent need for the Chinese-Kazakh trade. economic cooperation. At the present stage, resolved practical problems are also the meaning of the intensive and detailed development of the “One Belt, One Road Initiative” and are of greater practical importance for the sustainable development of Sino-Kazakh trade in agricultural products and the all-round promotion of economic and trade pragmatic cooperation.

Within the framework of the “One Belt, One Road” concept, the author of the article indicates the

ways of solving problems that will contribute to the implementation of effective directions in the relationship between the two parties – between Kazakhstan and China.

In order to strengthen bilateral cooperation in the agricultural sector and promote the in-depth development of bilateral cooperation between Kazakhstan and China in the field of trade in agricultural products, it is important to implement effective measures, including: activation of investment policy in agriculture, development of cooperation in the field of agricultural technologies, export of agricultural machinery, intensification of cooperation in the field of labor and contract agriculture, as well as other important areas.

Literature review

State government documents are devoted to the problematic issues of the development of trade and economic cooperation between the two regions of the world – Kazakhstan and the PRC – the development and implementation began in 1996. The list of intergovernmental program documents includes the Joint Declaration of the PRC and the RK, the Agreement between the Government of the RK and the Government of the PRC on economic, scientific and technical cooperation, the Beijing Declaration

of the RK and the PRC, the Agreement between the Government of the RK and the Government of the PRC on the joint deployment of cooperation in the energy sector, 1996 and other documents of state importance (Beijing Declaration of the RK and PRC, 2000; Message from the President of the Republic of Kazakhstan N. Nazarbayev to the people of Kazakhstan, 2012; Strategy “Kazakhstan-2050.” New political course of the established state, 2012; Joint declaration of the PRC and the RK, 2003; Joint statement of the RK and PRC, 2004; Agreement between the Government of the RK and the Government of the PRC on economic, scientific and technical cooperation, 2000; Agreement between the Government of the Republic of Kazakhstan and the Government of the PRC on the joint deployment of cooperation in the energy sector, 1996; other). The listed intergovernmental agreements reflect the chronology of events related to the development of interstate cooperation since the 90s, including the modern period.

Other foreign intergovernmental documents developed by individual states should also be noted. These include the Agreement on the Mutual Reduction of Armed Forces in the Border Area. Moscow, 1997, Agreement on mutual reduction of armed forces in the border area, International Logistics Performance Index, Information Digest of the Union of Transport Workers of Kazakhstan “KAZLOGISTICS”, Kazakhstan and the New Silk Road. The Importance of a Common Vision Towards New Opportunities, 2017, Russia on the New Silk Road. The listed international projects to one degree or another affect the issues of interstate cooperation in the field of economy, trade, transport logistics, as well as other important aspects (Agreement on the mutual reduction of armed forces in the border area. Moscow, 1997; International Logistics Performance Index, 2018; Information Digest Union of Transport Workers of Kazakhstan “KAZLOGISTICS”, 2018; Agreement on Mutual Reduction of Armed Forces in the Border Area. Moscow, 1997; Rahul Gupta, Yevgeny Orlovsky. Kazakhstan and the New Silk Road. The Importance of a Common Vision on the Path to New Opportunities, 2017; Russia on the New Silk Road ways, 2015 and others).

Russian scientists did not stand aside, who are actively investigating this problem, which is reflected in such works as Analysis of Economics. Country, Market, Firm, Tectology: Global Organizational Science, Asia-Pacific in the Context of Globalization, Belt and Road Project 2. 0 – Strategy to Stimulate China’s Global Expansion, Economic Review: The Role of the Belt and Road Initiative in as a force for the recovery of the global economy and the

plan for world development. Xinhua News Agency and other works (Asia-Pacific region in the context of globalization, 2001; Analysis of the economy. Country, market, firm, 1999; Bogdanov AA Tectology: General Organizational Science, 1989; Izhu Liu, Avdokushin EF Project “One Belt, One Road “2. 0 – A Strategy for Stimulating China’s Global Expansion”, 2019; Economic Review: The Role of the Belt and Road Initiative as a Force for Global Economic Recovery and Global Development Plan. Xinhua News Agency. 2017; and other works).

Of interest are the studies of Kazakhstani authors, including: B. Zhurkabaeva, V. V. Mozharova, B. K. Nurgaliev. and other scientists – experts (Zhurkabaeva B. Look into the future, 2013; Mozharova V.V. Transport in Kazakhstan: modern situation, 2011; Nurgaliev B.K. Chinese “Belt-way”: Kazakhstan and geopolitics / KAZINFORM. – Nur-Sultan, 2.06.2020 and other studies).

Research methodology

The author of the scientific article used the program documents of official state bodies and non-governmental organizations, economic and statistical data, monographic works and research of expert scientists, scientific publications and data from Internet resources.

The research methodology is based on the use of a systematic approach and system analysis, scientific-theoretical, informational material of economic and legal nature, including the works of foreign and domestic scientists-experts, legal acts.

The article used such scientific research tools that can be attributed to general scientific and special methods, such as: comparative analysis, economic and statistical method, methodological analysis, marketing and chronology.

Discussion and results

The scientific article reveals the main provisions and chronology of the development of trade and economic cooperation between two regions of the world – Kazakhstan and China. The author has structured the content of the article according to key problem areas.

1. The status quo and features of the development of trade in agricultural products between China and Kazakhstan.

In terms of the volume of bilateral trade in agricultural products, agricultural exports from China to Kazakhstan in 2009 amounted to about USD 131 million, and in 2018 the export value was about USD

308 million, which is 2.4 times more than in 2009. year. The listed indicators are shown in the following figure as average annual growth over the last ten years (see figure 1):

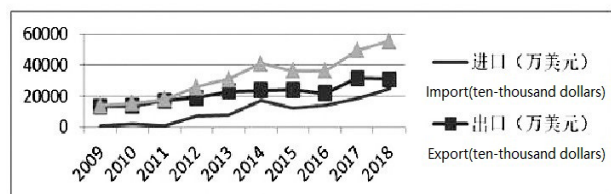


Figure 1 – Dynamics of trade in agricultural products between China and Kazakhstan in 2009-2018 (shown in USD 10 thousand)

The dynamics of indicators is estimated at about 10%. Figure 1 clearly shows that trade in agricultural products between China and Kazakhstan (whether export or import) is generally positive.

Agricultural export trade data for the last ten years can be roughly divided into three stages:

The first stage (from 2009 to 2014) of trade in agricultural products developed at a relatively fast pace, of which the growth rate of trade from 2009-2010 was relatively stable. It was the global financial crisis of 2008 that led to the economic downturn in the past two years, which has kept agricultural exports relatively stable over the past two years. After that, until 2014, China's agricultural exports to Kazakhstan gained momentum and continued to grow rapidly.

In the second phase (from 2014 to 2016), the value of agricultural exports fell from USD 236 million to USD 218 million, i.e. by about 7%. The reason for this analysis may be that the price of crude oil fell sharply under the influence of the international environment. The downturn in the trading market and the unstable political environment in Kazakhstan have led to certain restrictions on the export of Chinese agricultural products.

The third stage (from 2016 to the present) is associated with the further implementation of innovation policy in agricultural science and technology (production equipment), which was reflected in the "Bright Road" program proposed by the Kazakh side, which happened after the successful docking of the "One Belt, One Road" and "Bright road" - China. Export trade in agricultural products returned to the first stage and subsequently developed at a relatively fast pace.

2. Obstacles to the development of Sino-Kazakh trade in agricultural products.

Let's list the main obstacles to the possible effective development of trade and economic relations between Kazakhstan and the PRC:

(1) *The absence of a cooperation mechanism in the field of agricultural trade does not contribute to the long-term and stable development of bilateral trade in agricultural products.*

Currently, most of the cooperation in the field of agricultural trade between China and Kazakhstan is carried out within the framework of the working group on agricultural trade and economic cooperation under the Subcommittee on Economy and Trade of the China-Kazakhstan Cooperation Committee.

Although five working group meetings have been successfully held and some practical results have been achieved in many areas of agricultural trade. However, both sides did not create a special agency for cooperation in agricultural trade and did not sign the corresponding agricultural trade and investment framework, policy documents and the Agreement. Thus, the long-term lack of a cooperative mechanism for agricultural trade has led to many problems such as arbitrariness in trade and enforcement, as well as irregular management of "gray customs".

Trade risks have risen, especially since both sides have not yet developed a single annex. International Trade Standardization Rules are subject to a variety of trade frictions and disputes that have a serious negative impact on the stable, sustainable and healthy development of Sino-Kazakh agricultural trade.

(2) *The presence of non-tariff trade barriers impedes the development of bilateral trade in agricultural products.*

In 2015, Kazakhstan officially joined the WTO. The average tax rate on agricultural products in the country fell from 15.6% to 11.3%. In accordance with the WTO commitments, the tax rate will be further reduced and tariff barriers will be eased. Non-tariff trade barriers remain strong and trade protection policies have become even stronger.

This is mainly reflected in the following five factors:

- firstly, restrictive measures on imports and exports. Since 2007, Kazakhstan has introduced strict restrictions on the import of livestock products to China;

- secondly, there are a number of problems with customs declaration, such as complex procedures, high costs, long time and the need for multiple and duplicate inspection documents.

- thirdly, there have been technical barriers in trade for a long time. For a long time, China and Kazakhstan have had a low degree of mutual recognition of technical standards, rules and procedures for assessing the conformity of agricultural trade between the two countries. Especially with the integra-

tion of common European technical standards within the Eurasian Economic Union, Kazakhstan exported Kazakh agricultural products to China, creating a strong technical barrier.

- Fourth, trade protection measures such as animal and plant health inspections, as well as quarantine policy barriers and “double reverse” investigations are also important factors hindering the expansion of China’s agricultural exports to Kazakhstan.

- Fifth, green trade barriers are becoming more visible. With the increase in quality control standards for Kazakh agricultural products, many quality and characteristic agricultural products have emerged that have been rejected by Kazakhstan due to excessive drug residues, poor quality, inconsistent use of additives and potential hazards.

3. Strategies for the development of trade in agricultural products between China and Kazakhstan within the framework of the “One Belt, One Road” initiative.

(1) Actively create a long-term cooperation mechanism in the field of agricultural trade, and effectively improve the level of bilateral trade in agricultural products.

The long-term limited level of development of agricultural trade between China and Kazakhstan is mainly due to the lack of long-term high-level development and strategic communication on cooperation in the field of agricultural trade.

In this regard, it is necessary to accelerate the creation of a high-level intergovernmental meeting and a dialogue mechanism for bilateral agricultural trade cooperation, agree on the priorities and directions of bilateral agricultural trade cooperation at a high level, jointly negotiate and solve problems and difficulties in cooperation, and assist both parties to reach a consensus about cooperation and implementation of appropriate policies to achieve profit sharing and win-win situation.

To actively improve the framework of the bilateral cooperation system in agricultural trade and accelerate the signing of relevant memorandums of cooperation and trade agreements in relation to agricultural trade types, tariffs and prices. Strengthen communication and consultation between the customs services and quality control departments of the two countries, clarify the quality certification, inspection and quarantine standards of various agricultural products of both sides, standardize trade rules, ensure trade security and reduce trade frictions.

(2) Make full use of the opportunities and economic priorities of the SCO, WTO and other framework agreements to promote the development of bilateral trade in agricultural products.

Both China and Kazakhstan are within the SCO and WTO, which provide a platform for cooperation in agricultural trade between the two countries and lay a solid foundation for enhanced cooperation between the two countries. How are China’s Belt and Road and Kazakhstan’s Bright Path connected?

The two countries reached a consensus on the main directions of national development. In the future, they should take full advantage of the political advantages of the existing platform to promote horizontal and vertical development of agricultural trade between the two countries and develop towards liberalization and facilitation.

On the one hand, it is necessary to fully use the function of the SCO platform and promote the development of China-Kazakhstan trade in agricultural products on a multilateral and bilateral basis. At present, the SCO has signed a number of documents on agricultural cooperation policy, including an economic and trade cooperation plan, an agricultural cooperation agreement, a quality inspection agreement, a trade facilitation plan, etc.

On the other hand, it is necessary to effectively use the WTO framework agreement to maximize the elimination of obstacles to the development of agricultural trade between the two parties. With Kazakhstan’s accession to the WTO, its internal tariffs on agricultural products are high, trade procedures are not standardized, dispute resolution is difficult, “gray customs clearance” and other issues are gradually being resolved, which will undoubtedly have a positive impact on development. trade in agricultural products between China and Kazakhstan.

(3) Promote the development of trade in agricultural products through agricultural cooperation and fully exploit the potential for the development of bilateral trade in agricultural products.

Strengthening bilateral cooperation in the agricultural sector and promoting deeper development of bilateral cooperation in agricultural trade through effective measures such as active investments in agriculture; development of cooperation in the field of agricultural technologies, export of agricultural machinery; intensification of cooperation in the field of labor and contract agriculture and other important areas.

It should be noted that actively direct the two countries to implement investment cooperation in the agricultural sector closely related to bilateral agricultural products. Therefore, it becomes important to invest in profitable agricultural products of the two countries through cooperation on projects and exchange of improved varieties such as fruits, vegetables and aquatic products to China, and in Kazakhstan – grain and livestock products.

It is also necessary to encourage domestic agro-industrial enterprises, institutes of agricultural sciences, etc. In order to actively integrate with the Republic of Kazakhstan, it is necessary to combine its own industry, technology, capital and advantages in management with the advantages of agricultural resources in Kazakhstan, as well as attract foreign investment to create and develop factories and processing bases in the field.

There is a need to ensure that processing trade is free of trade barriers and actively unleashes the potential of bilateral agricultural production. It is important to increase the scale of exports of agricultural machinery and equipment from China to Kazakhstan and focus on improving the level of agricultural production and the efficiency of agricultural production in Kazakhstan. To actively develop talents for bilateral trade in localized agricultural products and effectively raise awareness of the Kazakh language, administrative rules, trade rules and cultural customs through training courses and workshops.

Relying on Internet + technology, it is important to actively create a platform for the exchange of agricultural electronic information, which generally contributes to the promotion of bilateral cross-border e-commerce in specialty agricultural products, combining custom farming and online sales. It is also necessary to fully exploit the potential of mutually complementary and profitable trade in goods of the two sides, while rational planning the structure of the division of labor in agricultural trade.

From the Chinese side, it is necessary to actively develop profitable and efficient agricultural sectors, increase the export of profitable products, such as fruits and vegetables, supplied to Kazakhstan. It is necessary to constantly optimize the structure of exports of products, improve their quality, use the effectiveness of well-known brands and reduce (mitigate) the likelihood of obstacles to the export of Kazakh agricultural products.

Conclusion

The author of the scientific article highlighted the main obstacles to effective cooperation between China and Kazakhstan. Among these obstacles:

1) The absence of a cooperation mechanism in the field of agricultural trade does not contribute to

the long-term and stable development of bilateral trade in agricultural products.

2) The presence of non-tariff trade barriers hinders the development of bilateral trade in agricultural products.

In the most generalized form, the further development of the Chinese-Kazakh trade in agricultural products within the framework of the "One Belt, One Road" concept will be facilitated by the implementation of the following strategic directions in relations between the two countries – China and Kazakhstan:

1) activation of the creation of a long-term cooperation mechanism in the field of trade in agricultural products and an effective increase in the level of bilateral trade in agricultural products.

2) full use of economic opportunities and advantages in the development of international integration unions of the SCO, WTO and other framework agreements to promote the development of bilateral trade in agricultural products.

3) promoting the development of trade in agricultural products through agricultural cooperation and fully exploiting the potential for the development of bilateral trade in agricultural products.

Kazakhstan has a long history of trade exchanges with China. Under the guidance of the "One Belt, One Road" initiative, the continuous development of agricultural trade between the two countries not only inherits the history of trade exchanges between the two countries, but also complements the shortcomings in the economic and trade fields. In recent years, the two countries have achieved satisfactory results in economic and trade cooperation in many fields.

Among them, agricultural product trade, as an important area of bilateral trade, has developed rapidly. In the past ten years, China-Kazakhstan agricultural product trade has grown at an average annual rate of 10%. The total trade volume has increased by 2.4 times. With the smooth opening of the China-Europe express train in 2013, Kazakhstan straddles Europe and Asia. In recent years, Kazakhstan has continuously increased investment, improved infrastructure conditions, and improved overall customs clearance efficiency. So far, it has exceeded 90% of the China-Europe train passes through Kazakhstan. Thanks to the blessing of the China-Europe train, the future of China-Kazakhstan agricultural trade will enter a new stage of development.

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REVISITING THE EXPORT-LED GROWTH HYPOTHESIS USING ARDL APPROACH: EMPIRICAL EVIDENCE FROM KAZAKHSTAN

The export-led growth (ELG) hypothesis believes that the economy's growth is determined by the growth of the labour force and capital formation and its export growth. According to neo-classical, ELG are essential for both developed and developing countries. It promotes economies of scale, increases labour productivity, availability of quality goods and services, increases employment opportunities, increases economic efficiencies, and increases economic growth. The effect of exports is determined through a neoclassical production function, examining exports' role after controlling the labour force and capital formation. The analysis is based ARDL model on testing for the short-run and long-run effects of independent variables. The long-run coefficient of exports is 0.38, while the short-run coefficient is 0.28 and statistically significant. Therefore, exports impact positively on G.D.P. per capita in both the short-run and long-run. Also, the coefficient of error correction term (E.C.M.) is negative and statistically significant, showing the speed of adjustment towards equilibrium from short-run to long-run. Therefore, Kazakhstan's government should increase exports that can increase the G.D.P. per capita better.

Key words: ARDL, exports, economic growth, Kazakhstan, capital formation.

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ARDL тәсілін қолдана отырып экспорттың өсу гипотезасын қайта қарау: Қазақстанның эмпирикалық дәлелдері

Экспортқа негізделген өсу (ELG) гипотезасы экономиканың өсуі жұмыс күші мен капиталдың өсуімен және оның экспорттық өсуімен анықталады деп санайды. Нео-классикалық көзқарас бойынша ELG дамыған және дамушы елдер үшін өте қажет. Ол ауқымды үнемдеуге ықпал етеді, еңбек өнімділігін, сапалы тауарлар мен қызметтердің қол жетімділігін арттырады, жұмыспен қамту мүмкіндіктерін арттырады, экономикалық тиімділікті арттырады, демек, экономикалық өсімді арттырады. Экспорттың әсері неоклассикалық өндіріс функциясы арқылы анықталады, бұл жұмыс күші мен капиталды қалыптастыруды бақылаудан кейінгі экспорттың рөлін зерттейді. Талдау тәуелсіз айнымалылардың қысқа мерзімді және ұзақ мерзімді әсерін тексеруге негізделген ARDL моделіне негізделген. Экспорттың ұзақ мерзімді коэффициенті 0,38 құрайды, ал қысқа мерзімді коэффициент 0,28 және статистикалық маңызды. Сондықтан экспорт G.D.P.-ге оң әсер етеді. жан басына шаққанда қысқа мерзімді де, ұзақ мерзімді де. Сондай-ақ, қателіктерді түзету коэффициенті (E.C.M.) теріс және статистикалық тұрғыдан маңызды, тепе-теңдікке бейімделу жылдамдығын қысқа мерзімдіден ұзақ мерзімдіге дейін көрсетеді. Сондықтан, Қазақстан үкіметі экспорттың өсуіне назар аударуы керек, бұл G.D.P. жан басына шаққанда өте жақсы.

Түйін сөздер: ARDL, экспорт, экономикалық даму, Қазақстан, капиталды қалыптастыру

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Пересмотр гипотезы роста экспорта с использованием ARDL-подхода: эмпирические доказательства по Казахстану

Гипотеза роста за счет экспорта (ELG) предполагает, что рост экономики определяется ростом рабочей силы и накопления капитала, а также ростом ее экспорта. Согласно неоклассической ELG необходимы как для развитых, так и для развивающихся стран. Это способствует экономии за счет

масштаба, увеличивает производительность труда, доступность качественных товаров и услуг, увеличивает возможности трудоустройства, повышает экономическую эффективность и, следовательно, ускоряет экономический рост. Влияние экспорта определяется через неоклассическую производственную функцию, исследующую роль экспорта после контроля над рабочей силой и накоплением капитала. Анализ основан на модели ARDL на тестировании краткосрочных и долгосрочных эффектов независимых переменных. Долгосрочный коэффициент экспорта составляет 0,38, а краткосрочный коэффициент – 0,28 и является статистически значимым. Таким образом, экспорт положительно влияет на G.D.P. на душу населения как в краткосрочной, так и в долгосрочной перспективе. Кроме того, коэффициент исправления ошибок (Е.С.М.) является отрицательным и статистически значимым, показывая скорость корректировки к равновесию от краткосрочного к долгосрочному. Таким образом, правительство Казахстана должно сосредоточиться на увеличении экспорта, что повлечет увеличение ВВП на душу населения.

Ключевые слова: ARDL, экспорт, рост экономики, Казахстан, формирование капитала.

Introduction

Ricardo's comparative advantage theory explains that countries should specialize in producing commodities in which they are efficient and trade those commodities with the rest of the world. By exporting these efficient goods, a country can earn foreign currency to pay for importing those commodities in which country has a disadvantage. This theory has given birth to the export-led growth hypothesis (Zuniga, 2000). The export-led growth (ELG) hypothesis believes that the economy's growth is determined by the growth of the labour force and capital formation and its export growth (Fatimah & Qayyum, 2018).

According to neo-classical, ELG is essential for both developed and developing countries. It promotes economies of scale, increases labour productivity, availability of quality goods and services, increases employment opportunities, increases economic efficiencies, and increases economic growth (Fatimah & Qayyum, 2018; Kruger (1978)). Exports increase the incentives to increase sales in domestic and foreign markets, leading to resource allocation according to comparative advantage and increasing technology development in response to world competition (Bela Balassa, 1978). Likewise, the country's opting for import substitution policies face higher costs due to small national markets.

ELG hypothesis has not been accepted by the academicians but has shaped various countries' development policies (Krueger, 1978). During mid-1970's most of the developing countries opted for export promotion strategies. This is because the inward-oriented policies under the import substitution strategy showed poor growth performance. Developing countries were forced to implement an export-led strategy by making

adjustments and stabilization to stimulate growth performance. It was considered exports would enable them to correct external sector imbalances and stimulate growth.

Kazakhstan is the ninth largest country globally and second-largest in the Commonwealth of Independent States (C.I.S.) after Russia and the Largest country in Centre Asia. It has shown tremendous economic growth performance since 2000. The country's exports were 51.777 Million US dollars in 2007 and increased to 67.083 million U.S. dollars in 2018. Therefore, the paper aims to examine the impact of exports on the Kazakhstan economy's economic growth by determining the long-run relationship between variables by employing modern time series econometrics techniques.

The paper's structure is designed as; the following section contains material and methods followed by literature review, results, and discussion. A conclusion finally follows it.

Literature Review

There has been considerable interest among economists in understanding the cause of disparities in growth rates across countries. Usually, two approaches are employed while understanding the cause of differences; the first approach is from the demand perspective, which recognizes the importance of demand factors and exports as a cause of disparities in growth rates across countries. The prominent supporter of this approach is Prebisch (1959), Seers (1962) and Myrdal (1971). The second approach is the supply-side perspective, which explains the growth rate differences through the exogenous model developed by Solow (1956) and Swan (1956) and endogenous growth models developed by Romer (1986); Lucas (1988), and Barro (1989). From the first approach, exports are essential

in determining growth differences across countries. According to Thirlwall (2012), it is evident that exports are critical for financing imports.

Authors use various methodological techniques to verify the hypothesis of ELG. Sultanuzzaman, Hongzhong, Mahamud, Banban, and Sarker (2017) examined the long-run relationship between exports, FDI, and economic growth in Sri-Lanka during 1980-2016. Using ARDL, the authors found a negative and significant relationship between exports and G.D.P. growth in the long run. It is because Sri-Lankan Exports are mainly primarily product-based. Ghazi and Bashier (2015), while applying the same methodology in Jordan during the period 1980-2012, found a positive impact of exports both in the long run and short-run

Bakari and Saaidia (2016) examined the relationship between exports, imports, and G.D.P. of China during 1960-2015. Using the Error Correction Model (E.C.M.), the authors found a positive impact on exports and a negative impact of imports on the G.D.P. of china.

Dritsakia and Stiakakis (2014) Examined the dynamic causal relationship between exports, G.D.P., and FDI. Using the ARDL/ ECM model, the authors found the bidirectional short-run and the long-run relationship.

Material and Methods

Econometric Modeling

The economic growth of the economy can be represented by using neoclassical Cobb-Douglas production as:

$$Y_t = \beta_0 K_t^{\beta_1} L_t^{\beta_2} \quad 0 < \beta_1, \beta_2 < 1 \quad (1)$$

where Y is the aggregate production of the economy at period t . β_0 is the level of technology, also known as total factor productivity (T.F.P.). K_t is the stock of capital of the economy at period t and L_t is the Labour Force of the economy at period t . β_1 , β_2 represents the capital stock and labour force share of income, respectively. The current paper modifies the neoclassical production function by including the exports to the equation (1). The augmented neoclassical production function can be represented in Cobb-Douglas production as:

$$Y_t = \beta_0 K_t^{\beta_1} L_t^{\beta_2} X_t^{\beta_3} \quad 0 < \beta_1, \beta_2, \beta_3 < 1 \quad (2)$$

where X_t are the exports of the economy at period t with its β_3 coefficient share of income. Other

variables are the same as discussed in equation (1). The inclusion of exports as a third variable in determining the economy's aggregate production determines the T.F.P. growth (Ghazi & Bashier, 2015). As documented in Ghazi and Bashier (2015), Salvator and Hatcher (1991) provide four reasons for the inclusion of exports as a third factor, (I) incentives associated with exports lead to T.F.P. growth because it leads to lower capital-labor ratio. (II) Exports reduce the foreign exchange constraints and therefore lead to greater access to international markets. (III) It helps in technological transfer between the countries and consequently, technological innovation and lastly (IV). It increases job opportunities and increases labour productivity. However, exports cannot lead to economic growth if the core variables of production (i.e., Labour force and capital) are low. Therefore it becomes essential to examine the impact of exports in relation to the other factors.

Empirical findings of equation (2) can be found by linearizing it by taking logs and expressing it econometrically as given below:

$$\begin{aligned} \ln(Y_t) &= \beta_0 + \beta_1 \ln(K_t) + \\ &+ \beta_2 \ln(L_t) + \beta_3 \ln(X_t) + u_t \end{aligned} \quad (3)$$

where β_0 represents a constant parameter of the regression line. u_t is the error term representing the influence of other variables other than labour force, capital, and exports of the economy.

Equation (3) is in the form of time series and can be examined by applying the time series econometric technique.

Unit Root Test

Most of the economic variables are trended and, therefore, non-stationary. Using O.L.S. regression can lead to a problem of spurious regression that is both R^2 and values of t statics are high while the variables have no economic relationship and therefore lead to incorrect conclusions. Thus, for actual results, the data series should be stationary. The variables' stationarity is tested using A.D.F. (Augmented Dicky-Fuller Test) and P.P. (Philip-Perron) tests are used. A.D.F. takes into account higher-order correlation by adding the lagged differences of variable and takes the form as:

$$\begin{aligned} \Delta X_t &= \varphi + \gamma t + \beta X_{t-1} + \\ &+ \sum_{i=1}^k \beta_i X_{t-i} + u_t \end{aligned} \quad (4)$$

where X_t is the variable to be estimated, ΔX_t is the first difference ($\Delta X_t = X_t - X_{t-1}$), φ is the constant term, t is the time trend, and u_t is the error term.

The above test is based on the null hypothesis, that the data series is no stationary, i.e., $\beta = 0$, and the alternative hypothesis data series is stationary ($\beta \neq 0$).

The A.D.F. test is based on the assumption that error terms are normally distributed and have homoskedicity (i.e., constant variance). P.P. test developed by Phillips and Perron (1988) is a non-parametric test. The test is based on a regression equation, which is AR (1) process, and is based on less restrictive assumptions related to the error terms:

$$\Delta X_t = \varphi + \gamma t + \beta X_{t-1} \quad (5)$$

Co-integration Test

A Co-integration test is utilized to check whether there exists a long-run relationship between variables is not. After variables became stationary at the difference, the next step is to check Co-integration among the variables. We apply the ARDL bounds testing approach to examine the co-integration for the long-run relationship between G.D.P., exports, labour force, and capital of the Kazakhstan economy. The ARDL test of co-integration used in our model takes the form as:

$$\begin{aligned} \Delta GDP_t = & \alpha_{01} + \gamma_{11}K_{t-1} + \gamma_{21}L_{t-1} + \\ & + \gamma_{31}X_{t-1} + \gamma_{41}GDP_{t-1} + \sum_{i=1}^k \beta_{1i}K_{t-i} + \\ & + \sum_{i=1}^k \beta_{2i}L_{t-i} + \sum_{i=1}^k \beta_{3i}X_{t-i} + \\ & + \sum_{i=1}^k \beta_{4i}GDP_{t-i} + u_{1t} \end{aligned} \quad (6)$$

The null hypothesis of the above test is that there is no co-integration against the alternative hypothesis of there is co-integration, i.e.,

$$H_0: \gamma_{11} = \gamma_{21} = \gamma_{31}$$

$$H_1: \gamma_{11} \neq \gamma_{21} \neq \gamma_{31}$$

Determining Long-run and Short-run Relationship

If the variables are co-integrated, then we can express the relationship between G.D.P. and other factors as:

$$\begin{aligned} GDP_t = & \alpha_{01} + \sum_{i=1}^k \gamma_{11}K_{t-i} + \\ & + \sum_{i=1}^k \gamma_{21}L_{t-i} + \sum_{i=1}^k \gamma_{31}X_{t-i} + \\ & + \sum_{i=1}^k \gamma_{41}GDP_{t-i} + u_{1t} \end{aligned} \quad (7)$$

Dynamic error correction model (DECM) can arise from bounds test of ARDL co-integration to incorporate short-run dynamics with long with equilibrium. DECM is expressed as:

$$\begin{aligned} \Delta GDP_t = & \alpha_{01} + \sum_{i=1}^k \beta_{1i}\Delta K_{t-i} + \\ & + \sum_{i=1}^k \beta_{2i}\Delta L_{t-i} + \sum_{i=1}^k \beta_{3i}\Delta X_{t-i} + \\ & + \sum_{i=1}^k \beta_{4i}\Delta GDP_{t-i} + \\ & + ECM_{t-i} + u_{1t} \end{aligned} \quad (8)$$

Where E.C.M. is the error correction term. Its coefficient should be negative and statistically significant. It shows the speed at which the variable is returning to its long-run equilibrium path.

For this paper, firstly, we studied descriptive statistics and correlation analysis. Secondly, we examined the stationary of data through A.D.F. and Philips and Perron test. Before testing co-integration, we checked for necessary lags through the V.A.R. model to determine its optimum lag. Fourthly we run the ARDL model to study for long-run co-integration among variables. In the fifth step, we examined the long-run and short-run relationships. Lastly, we test serial correlation, heteroscedacity, and stability of the model.

Results and Discussions

Descriptive Statistics and Correlation Analysis

Table 1 shows the descriptive statistics of Gross Domestic Product (G.D.P.), capital formation (K), Labour Force (L), and Exports (X) of the Kazakhstan economy from 2000-2018. Also, the table shows the correlation among variables of the study. It can be seen that there is a positive correlation between variables.

Table1 – Descriptive Statistics and Correlation Analysis

	LNGDP	LNK	LNL	LNK
Mean	25.61382	24.19939	15.95046	24.85951
Median	25.65034	24.34934	15.96375	24.90547
Maximum	26.04171	24.76981	16.04087	25.04053
Minimum	24.92573	23.01097	15.85077	24.50363
Std. Dev.	0.343982	0.544580	0.070747	0.152700
Skewness	-0.560199	-0.812926	-0.165022	-1.255902
Kurtosis	2.116466	2.386856	1.454420	3.588341
Jarque-Bera	1.611774	2.390313	1.977384	5.268783
Probability	0.446691	0.302657	0.372063	0.071763
Sum	486.6625	459.7884	303.0587	472.3308
Sum Sq. Dev.	2.129820	5.338208	0.090092	0.419713
Observations	19	19	19	19
Correlation Analysis				
LNGDP	1.000000			
LNK	0.984155	1.000000		
LNL	0.972228	0.933521	1.000000	
LNK	0.862871	0.888753	0.742104	1.000000

Unit Root Test

For checking the stationary of Gross Domestic Product (G.D.P.), Gross Capital Formation (K), Labour Force (L), and Export (X), we use A.D.F. (Augmented Dickey-Fuller) and P.P. (Phillips Perron) unit root tests through A.I.C. (Akaike Information Criterion) with both intercept and trend. Non-stationary variables can lead to spurious regression (Hill, Griffiths & Judge, 2001).

ARDL model suggests suggested that all variables should be stationary in I(0) and I(1) or I(1) or I(2) for running the model. So after unit root tests, we observe all variables, LNGDP in I(1), LN.K. in I(1), LN.L. in I(2), and LN.X. in I(1) are stationary at

10, 5, and 1 % significant level. A degree of mixing orders leads us to employ the ARDL bounds test of co-integration for determining the long-run relationship among the variables during the period 2001-2018 in the case of Kazakhstan. The next step is to check the bound test of co-integration.

Lag Length Criteria

Table 3 provides the optimum lag length criteria. The appropriate lag length is one of the important criteria for choosing the ARDL model. We use L.R., F.P.E., A.I.C., SC, H.Q., Log Y criteria for determining the optimum lag length of the model. We use maximum appropriate lag 2 for deciding the co-integration relationship among variables.

Table 2 – Unit Root Test

Variable	Augmented Dickey-Fuller Test		Phillips-Perron Test	
	t-Statistic	Prob	Adj. t-Stat	Prob
LNGDP	-1.605331	0.7444	-2.832207	0.2048
#D(LNGDP)	-4.263001	0.0202**	-2.648440	0.2662
LNK	-1.253813	0.8642	-1.836672	0.6443
D(LNK)	-3.527357	0.0728*	-3.309700	0.0981*
LNL	-1.507924	0.7856	-1.265656	0.8633
D(LNL)	-1.725539	0.6946	-1.600945	0.7491
D(LNL,2)	-4.559313	0.0121**	-4.723379	0.0091***
LNK	-1.937695	0.5940	-1.916868	0.6045
D(LNK)	-3.368878	0.0891*	-3.436586	0.0796*

Null Hypothesis: Variable has a unit root

Exogenous: Constant, Linear Trend

, **, * denotes significance at 10, 5, and 1 % significance level respectively. #, D denotes the difference of a variable*

Table 3 – Lag length criteria

Lag	Log L	LR	FPE	AIC	SC	HQ
0	47.52540	NA*	0.000353	-5.120635	-4.924585	-5.101147
1	49.11969	2.250768	0.000332*	-5.190552*	-4.945489*	-5.166192*
2	49.15778	0.049298	0.000377	-5.077386	-4.783311	-5.048155

ARDL Bound level Test of Co-integration

Table 4 provides the results ARDL bound test of co-integration to examine the long-run relationship among variables. We have used A.I.C. to determine the lag order for ARDL estimation. With a model based on intercept and no trend, the test results show that F-statistics is 17.78 and is higher than both lower

limit I(0) and upper limit I(1) in 10, 5, 2.5, 1 % significant level. Therefore test results suggest that there is a long-run co-integration association between the variables of interest. The test gives the lags for the model to check the short-run and long-run relationship. The next step is checking the long-run relationship.

Table 4 – ARDL Bound level Test of Co-integration

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	17.78	10%	2.37	3.2
		5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Long Run Estimates: ARDL approach

The long-run coefficients are shown in Table 5. The coefficient of exports is positive, with a value of 0.38, and is significant at a 5 % level of significance. If 100% increases in exports, it leads to a 38% increase in G.D.P. per capita income. The results indicate that exports are an essential factor for Kazakhstan's economy. Findings advise that policymakers must consider the exports as a benchmark of the economy. The other variables of the study are the labour force

and gross capital formation. Both variables are significant at 1 and 5 % level of significance. A 100% increase in labour force leads to a rise in 137% increase in G.D.P. per capita while a 100% increase in gross capital formation leads to an 18% increase in G.D.P. per capita of Kazakhstan's economy. Therefore both variables are growth-enhancing factors of growth of the economy. The government of Kazakhstan must keep an eye on these factors for the economy's long-run economic growth.

Table 5 – Long Run Estimates: ARDL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-26.90909	7.350694	-3.660755	0.0026
Ln (L)	1.376185	0.409757	3.358537	0.0047
Ln (X)	0.387052	0.146346	2.644784	0.0192
Ln (K)	0.181907	0.076967	2.363434	0.0331

Short-Run Estimates: E.C.M. approach

Table 6 shows the short-run estimates. The results show that the coefficient of $d(\text{Ln.X.}(-1))$ 0.28 and is significant at 5%. If the current year FDI increases by 100%, G.D.P. per capita rises by 28%. Therefore exports have a positive spill-over impact

both in the long run and in the short run. It shows that exports are a crucial determinant of G.D.P. per capita of Kazakhstan. That other variables labor force has a positive coefficient but is insignificant. Capital formation is having a positive coefficient and is statistically significant.

The coefficient of error correction term (E.C.M.) is negative and statistically significant. It confirms the long-run relationship between variables. The coefficient of E.C.M. (-1) shows the speed of

adjustment towards equilibrium. The coefficient of E.C.M. (-1) is -0.52, indicating an adjustment is corrected by 52% from short run to long run every year.

Table 6 – Short Run Estimates: E.C.M.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNL(-1))	1.083827	0.690376	1.569908	0.1404
D(LNX(-1))	0.282879	0.120563	2.346310	0.0355**
D(LNK(-1))	0.240737	0.058782	4.095392	0.0013*
ECM(-1)	-0.523160	0.270944	-1.930877	0.0756***

Sensitivity estimates

Table 7 shows the diagnostic test of the model. The serial correlation of the model is examined through the Breusch-Godfrey Serial Correlation L.M. Test. The results of the L.M. test based on F-statistics

confirm no serial correlation in the model. Likewise, the heteroskedasticity of the model is checked by using Breusch-Pagan-Godfrey and ARCH tests. Both tests confirm the absence of heteroskedasticity.

Table 7 – Diagnostic tests

	F-Statistic	Probability
Breusch-Godfrey Serial Correlation L.M. Test	2.886326	0.1675
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.696909	0.6996
Heteroskedasticity Test: ARCH	2.392896	0.1459

Source: Authors own calculation

Stability estimates

For verifying the stability of the model, we have used CUSUM and CUSUM Square Tests. The E.C.M. model proves that the model is stable through

both CUSUM and CUSUM Square Tests, as shown in Figure 1 and Figure 2, respectively. Each blue line plots should not lie outside critical values (i.e., should not cross red lines).

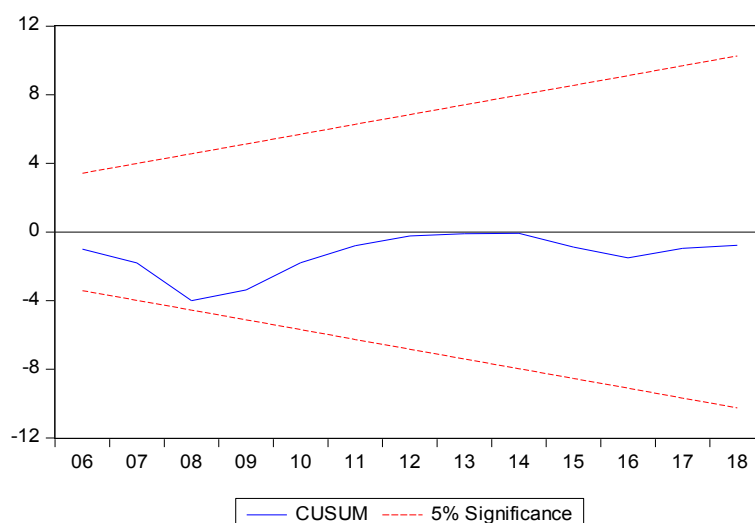


Figure 1 – CUSUM stability test

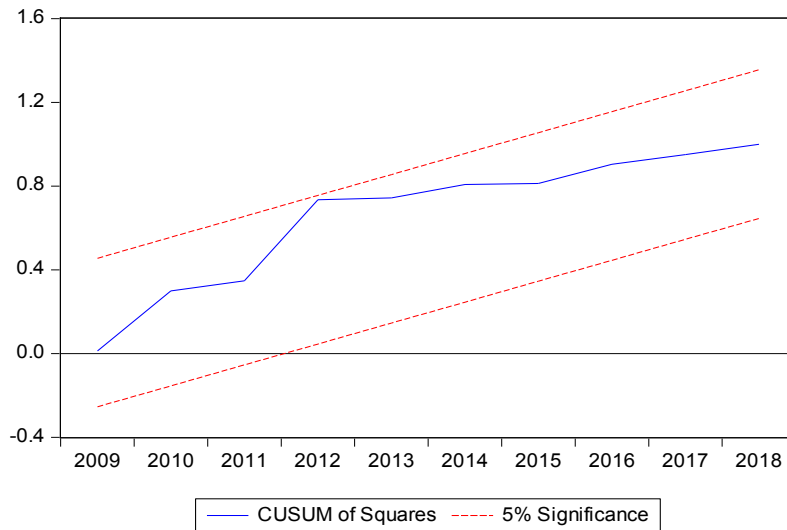


Figure 2 – CUSUM Square stability test

Conclusion

The paper attempted to find the impact of exports on the economic growth of Kazakhstan. The effect of exports is determined through a neoclassical production function, that is, examining exports' role after controlling the impact of the labour force and capital formation. The analysis is based ARDL model on testing for the short-run and long-run effects of independent variables. Unit root test confirms that variables are stationary at different orders. The Bound test of co-integration confirms the long-run relationship between G.D.P. per capita, exports, labour force, and Kazakhstan's capital formation during 2000-2018. The long-run impact of coefficients is determined through ARDL.




In contrast, short-run coefficients are examined through the E.C.M. Long-run coefficient of exports is 0.38, while the short-run coefficient is 0.28 and

statistically significant. Therefore exports impacts positively impact G.D.P. per capita in both short-run as well as in long-run. Also coefficient of error correction term (E.C.M.) is negative and statistically significant, showing the speed of adjustment towards equilibrium from short-run to long-run. Therefore, the government of Kazakhstan should focus on increasing exports. The government should also focus on increasing the capital formation and labor force of the economy as these variables positively and significantly impact the G.D.P. per capita of Kazakhstan's economy. Our research is limited in variables as well as in time-series data. Researchers may add more variables like government consumption, inflation, FDI to capture the influence of other variables on G.D.P. per capita. Also, increase the length of time series and checking multidirectional analysis can be a separate research area.

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HARMONIZATION THE EURASIAN ECONOMIC UNION COUNTRIES' LABOR LEGISLATION PRINCIPLES

Creation of united labor market on the territory of Eurasian economic Union leads to approximation of the labor laws of the Union's states. That kind of approximation aims to make cooperation and functioning of the newborn union more effective. The problem concerned the development of the directions and approaches of formation of the uniform labor legislation, among which are the institutes of an employment contract. The article considers the issues of harmonization of the EAEU countries labor legislation, balance between principles of labor law and the generally recognized world standards in the labor field. The article provides analysis of current legal acts adopted by the member states on the state level and in the framework of the EAEU. The article considers the need to develop a unified concept of harmonization of labor legislation, which, we believe, should be understood as a rapprochement of national labor laws, but not their unification, reduced only to the development of uniform standards designed for similar relations. Harmonization of the labour legislation of EurAsEC States should be considered from the point of view of its rapprochement, and not from the point of view of its unification, carried out to a State in order to further its development. In this sense, the harmonization of labor legislation in the EAEU states and the unification of labor legislation in a single country, carried out using national legal techniques, methods, should be considered as philosophical categories: general and private.

Key words: labor relations, Eurasian Economic Union, principles of law, principle of prohibition of discrimination, forced labor.

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Еуразиялық экономикалық одақ елдерінің еңбек заңнамасы қағидаттарын үйлестіру

Еуразиялық экономикалық одақ аумағында бірыңғай еңбек нарығын құру ЕАЭО елдерінің еңбек заңнамаларын барынша тиімді ынтымақтастық пен жаңа экономикалық одақтың жұмыс істеуі мақсатында жақындастыру қажеттілігіне әкеледі. Осыған байланысты бірыңғай еңбек заңнамасын қалыптастырудың бағыттары мен тәсілдерін әзірлеу туралы мәселе өткір көтерілуде. Мақалада ЕАЭО елдерінің еңбек заңнамаларын ары қарай гармонизациялау мәселелері, еңбек құқығы қағидаттары мен еңбек саласындағы жалпы танылған әлемдік стандарттардың арақатынасы қаралады. Мақалада ЕАЭО елдерінің ағымдағы мемлекеттік және Одақ шеңберінде қабылданған заң актілеріне салыстырмалы талдау жасалынады. Мақалада еңбек заңнамасын үйлестірудің бірыңғай ұғымын әзірлеу қажеттілігі қарастырылады, оны ұлттық еңбек заңнамаларын жақындастыру деп түсіну керек, бірақ оларды ұқсас қатынастарға есептелген біркелкі нормаларды әзірлеуге ғана әкелетін біріздендіру емес. ЕурАзЭҚ мемлекеттерінің еңбек заңнамасын үйлестіруді одан әрі дамыту мақсатында қандай да бір мемлекетке жүргізілетін біріздендіру позициясынан емес, оны жақындастыру позициясынан қарау қажет. Осы тұрғыдан алғанда ЕАЭО мемлекеттеріндегі еңбек заңнамасын үйлестіру және ұлттық заңдық тәсілдер, тәсілдер көмегімен жүргізілетін жеке алынған елдегі еңбек заңнамасын біріздендіру философиялық жалпы және жеке санат ретінде қарастырылуы қажет.

Түйін сөздер: еңбек қатынастары, Еуразиялық экономикалық одақ, құқық қағидаттары, кемсітушілікке тыйым салу қағидаты, мәжбүрлі еңбек.

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Гармонизация принципов трудового законодательства стран Евразийского экономического союза

Создание единого рынка труда на территории Евразийского экономического союза неизбежно повлечет за собой необходимость в сближении трудовых законодательств стран ЕАЭС в целях наиболее эффективного сотрудничества и функционирования нового экономического союза. В этой связи остро встает вопрос о выработке направлений и подходов формирования единого трудового законодательства. В статье рассматриваются вопросы гармонизации трудовых законодательств стран ЕАЭС, соотношение принципов трудового права и общепризнанных мировых стандартов в сфере труда. В статье проводится сравнительный анализ текущих законодательных актов стран, принятых на государственном уровне и в рамках ЕАЭС. В статье рассматривается необходимость в выработке единого понятия гармонизации трудового законодательства, которое, как мы полагаем, следует понимать как сближение национальных трудовых законодательств, но не их унификацию, сводимую лишь к выработке единообразных норм, рассчитанных на сходные отношения. Гармонизацию трудового законодательства государств ЕвразЭС необходимо рассматривать с позиций его сближения, а не с позиции его унификации, проводимую в каком-либо государстве в целях его дальнейшего развития. В этом смысле гармонизация трудового законодательства в государствах ЕАЭС и унификация трудового законодательства в отдельно взятой стране, проводимая с помощью национальных юридических приемов, способов, нужно рассматривать как философские категории: общее и частное.

Ключевые слова: трудовые отношения, Евразийский экономический союз, принципы права, принцип запрещения дискриминации, принудительный труд.

Introduction

We think that fundamental international principle – the principle of the right to work should be taken into account as its legal and scientific interpretation in the EEU States differs and in Kazakhstan are excluded from legislation.

It is through common, identical constitutional principles feasible to build general legislation, because this category of right objectively reflects needs of society through legislation via manifestation of consciousness and law enforcement activities of legislators.

Currently, there is no consensus view about the concept of legal principles in legal science. Summarizing approaches to the notion of “legal principles” that are found in the literature, It can be divided into main three. First one is a traditional approach, that exists in what is called traditional indigenous legal systems (Islamic law, Hindu Law). The notion of “legal principles” in those systems as such was not created, although there is a complex of fundamental ideas which are in fact legal principles. The second is the Romano-Germanic approach that embodied in countries with a Romano-Germanic legal tradition. For them such concept of law sources under which right is not created a priori and not contained

in legal statutes only is common. Moreover, some countries establish directly general legal principles as a source of law. For example, the Judge in Austria, Greece, Spain, Italy and Egypt in case of gaps in legislation is required to refer to general principles of law (David R. Sources of law). Article 6 of the Civil Code of Spain states that there are “general principles arising from Spanish codes and legislation” among the sources of law (David R., Joffre-Spinozy K., 1998). The French State Council as a higher authority of administrative justice when deciding on particular cases refers to justice as a source of law (David R., Joffre-Spinozy K., 1998, p.110). According to R. David's opinion, general principles reflect “subjugation of right by dictate of justice as it is understood in certain historical era” (David R., Joffre-Spinozy K., 1998, p.108). It is strong anti-positivist tendency common for the Romano-Germanic legal tradition, as David R., says. In particular, this is supported by Federal Supreme Court (Bundesgerichtshof) and Federal Constitutional Court of Germany (Bundesverfassungsgericht). The two organs announced in a series of decisions that constitutional law is not restricted to the text of Basic Law but include “some general principles which were not concretized in positive by legislator”, there is suprapositive law even linking constituent

authority of legislators. Thus, general principles of Romano-Germanic legal tradition are regarded as a sort of supreme law. Anglo-Saxon approach is a feature of countries related to legal system with a similar name. Concept of general principles of law historically didn't turn out in Anglo-Saxon countries. If there is a gap in the law, cases were addressed by reason. Later that principle was replaced by natural justice invented by English courts. Justice as a category has dual-use nature in English law. Thus, justice (equity) served as an instrument adjusting decisions of the civil trial-court, on appeal, in the Chancellor courts. Principles of natural justice form the basis for making decisions in the case of law gaps. Therefore, "principles of natural justice" are used in Anglo-Saxon countries instead of "legal principles" that, on top of everything, include procedural guarantees such as right to protection. It is important to note that general legal principles and principles of natural justice, above all, have the task of ensuring the fundamental human rights.

A word "principle" means "basis", "leading idea", "beginning" in Latin, and their philosophical message was founded by the law scientists straight into the concept of legal principles.

In particular, a number of authors, including S.S. Alekseyev, interpret the term of legal principles as follows: "Principles of law are guiding ideas characterizing the content of law, its essence and purpose in society" (Alekseyev, S.S., 2005). Kazakh jurists E.N. Nurgaliev and S.A. Bukharbayev, while supporting this view, note that such an understanding of the term reflects the external aspect of its content (Nurgaliev, E.N. & Nurgaliev, S.A., 2004). However, despite the unity of opinions and approaches of scientists in the general definition of law, the issue of the objective and subjective nature of the principles of law is still debatable in scientific circles. Some scholars adhere to the view of the subjective nature of legal principles and regard the principles of law as fundamental subjective ideas, views that are strictly abstract, not fixed by law, thereby transforming them into a theoretical category of legal consciousness. Thus, for the ideological position of legal principles, along with other researchers, (D.A. Kovachev, L.S. Yavich, O.V. Smirnov, A.M. Vasiliev), R.Z. Livshits, said that about fact that the principles of law are fundamental ideas, the beginnings that express the essence of law, the ideas of justice and freedom (Livshits, R.Z., 1994). A number of researchers, including V.M. Semenov, pointing to the objective nature of legal principles, which in turn are expressed in the fact that their formation and development is associated with the material con-

ditions of society and social relations. We join the opinion of theoreticians in the field of law, G.K.H. Shafikova and M.S. Sagandykov that the principles of law have both objective and subjective qualities. They are objective because they are conditioned by real economic and social qualities, and are subjective, since they are the results of law-making activity of the state, intellectual activity of the legislator (Shafikova, G.Kh., 2004). Thus, certain researchers are certainly right when they say that legal principles, being guiding, fundamental principles of law, being enshrined in the law, should not be identified with the rules of law, in other words, the principles of their legal significance are much higher than the norms of law (Abaideldinov, T.M., 2001).

If we analyze the labor legislation of the EAEU countries, the similarity of the principles is observed in the labor legislation of all the EAEU member states. A special feature of labour legislation in the Republic of Belarus is that the Labour Code of the Republic of Belarus (hereinafter the Labour Code of the Republic of Belarus), unlike labour legislation of other States, because it does not contain a separate chapter or section on the principles of labour law. Legal principles in the sphere of work are enshrined in the Constitution of the Republic of Belarus, as well as in certain norms of the Labour Code of the Republic of Belarus; Similarly to the constitutions of the Republic of Kazakhstan, the Russian Federation, the Republic of Armenia and the Republic of Kyrgyzstan.

We believe that the basis of the unified harmonized labor legislation of the EEU's countries should be generally recognized labor legal norms and principles enshrined in international legal instruments, uniform terms and definitions.

Problem statement

The prohibition of forced labor is one of the fundamental principles of international labor law enshrined in the 1998 ILO Declaration. Consideration of it as one of the fundamental principles of the functioning of labor relations in the EAEU and the unified labor legislation, in our opinion, should begin with the definition of this concept. According to ILO Convention No. 29, 1930 concerning Forced or Compulsory Labor, the term "forced or compulsory labor" means any work or service required of a person under threat of any penalty for which that person has not voluntarily offered his services (ILO Convention No. 29, 1930).

Definitions of "forced labor" differ in the labor legislation of the EEU countries. In this case, the

Republic of Kazakhstan is the only participating country that has established a precise definition of forced labor in accordance with an international document, whereas in the labor legislation of the rest of the States of the Union, the concept of forced labor has a more free interpretation. Thus, the Labor Code of Kazakhstan refers to forced labor as any work or service required of a person under threat of any punishment for which that person has not voluntarily offered his services. The Labor Codes of Kyrgyzstan, Russia and Belarus give a truncated concept of forced labor as work under threat of any punishment or force. The Convention defines forced or compulsory labor through two interrelated elements: (1) work under threat of any punishment and (2) for which a person has not voluntarily offered his services. In the definition given by the above-mentioned countries, forced labor is defined only through the first feature, the second component is absent. The Labor Code of Armenia does not provide at all for the interpretation of the term "forced labor," establishing only any form or nature of forced labor and violence against workers (Labor code of Armenia).

It also should be noted that in Russia and Belarus, the definition of forced labor is supplemented by conditions of coercion to work for purposes (art. 13 of Labor code of the Republic of Belarus, art. 4 of the Labor code of the Russian Federation):

- In order to maintain labour discipline (means of maintaining labour discipline);
- As a measure of responsibility for participation in a strike (means of punishment for participation in strikes);
- As a means of mobilizing and using labour for economic development (a method of mobilizing and using labour for economic development);
- As a punishment for the presence or expression of political views or ideological beliefs opposite to the established political, social or economic system (means of political influence or education or as a punishment for the presence or expression of political views or ideological beliefs opposite to the established political, social or economic system);
- As a measure of discrimination on the grounds of race, social, national or religious affiliation (present in Labor code of the Republic of Belarus).

In this case, we believe that the allocation of the above-mentioned conditions will not be necessary if the labour legislation of the EAEU countries contains an accurate and verbatim definition of forced labour, as interpreted by ILO Convention No. 29 "On Forced or Compulsory Labour" (ILO Convention No. 29)

In addition, the Labour Code of the Russian Federation has gone beyond, Designated by international norms and expanded the list of forms of forced labour. To include in this notion the violation of the prescribed time limits for payment of wages or the payment of their full amount, As well as the employer's demand from the employee to perform work duties, if the employee is not provided with means of collective or individual protection or the work threatens the life or health of the employee. Thus, according to the Labour Code of the Russian Federation, forced labour also includes work that an employee is forced to perform under threat of any punishment (force), while under this Code or other federal laws he has the right to refuse to perform it, including in connection with:

- Violation of the established time limits for payment of wages or payment of wages not in full;
- Immediate threat to the worker's life and health due to violation of labour protection requirements, in particular, failure to provide him with means of collective or individual protection in accordance with established standards (Labor code of the Russian Federation).

According to ILO experts who conducted a study of the phenomenon of forced labour in modern Russia, such an expansive interpretation of the concept of forced labour is ineffective for two reasons. First, both cases are inherently different from forced labour, and the relevant rights of employees should be protected through other legal mechanisms (wage protection and labour protection). Otherwise, measures to abolish forced labour will mainly focus on wage protection, occupational safety and health, that is, the meaning of this norm as a legal enforcement of the prohibition of forced labour will be "blurred." Secondly, the inclusion of these cases in the concept of forced labour leads to a contradiction with the international norms governing this issue (V. Anishina, D. Poletayev, E. Tyurukanova, S. Shamkov. M, 2004).

Under international labour law, the term "forced or compulsory labour" does not include:

- (A) any work or service required by the Compulsory Military Service Laws and applied to work of a purely military nature;
- (B) any work or service that is part of the ordinary civil duties of citizens of a fully self-governing country;
- (C) any work or service required of a person as a result of a judgement handed down by a judicial authority, provided that the work or service is carried out under the supervision and supervision of the

public authorities and that the person is not ceded or placed at the disposal of private persons, companies or societies;

(D) any work or service required under emergency circumstances, that is, in cases of war or disaster or threat of disaster, such as fires, floods;

(E) Minor work of a community nature, i.e. work performed for the direct benefit of the collective by the members of the collective in question, and which may therefore be considered ordinary civic duties of the members of the collective provided that the population itself or its direct representatives have the right to express their opinion as to the feasibility of the work (Conventions and recommendations adopted by the International Labour Conference. 1919–1956).

Article 8 of the Labour Code of the Republic of Kazakhstan, establishing the principle of prohibition of forced labour, does not refer to the performance of works which, formally possessing signs of forced labour, are not such and constitute works: (a) are part of the ordinary, civil duties of citizens established by the laws of the Republic of Kazakhstan; B) performed for the direct benefit of the collective by members of this collective, and which therefore can be considered ordinary civil duties of members of the collective provided that they or their representatives have the right to express your opinion on the expediency of these works. Let us not hide that the reflection of these legislative innovations presents some complexity, aggravated by the legislator's kind of interpretation of paragraphs "in" and "e" of the Convention concerning forced or compulsory labour. For example, paragraph "c" of the Convention does not include in the term "forced or compulsory labour" any work or service that is part of the ordinary civil duties of citizens of a fully self-governing country " ; And paragraph "e" refers to "small-scale community work," i.e. work performed for the direct benefit of the collective by the members of the collective in question, and which may therefore be considered the ordinary civic duties of the members of the collective, provided that the population itself or its direct representatives have the right to express their opinion as to the feasibility of the work. Having avoided commenting on article 7 of the Labour Code of the Republic of Kazakhstan in terms of understanding "ordinary civil duties of citizens established by the laws of the Republic of Kazakhstan," one of the co-authors of the article-by-article practical comment of the Labour Code of the Republic of Kazakhstan, with regard to works that are not forced labour, designated by us in paragraph "b," expresses his idea of them as follows: "Such works can be related to the

needs of an enterprise or organization (industrial, socio-cultural, economic, etc.)," – says the scientist (Labor Code of the Republic of Kazakhstan).

We believe that the legislator's free interpretation of the provisions of the Convention on forced or compulsory labour ratified by the Parliament of the Republic of Kazakhstan, which is limited to giving the concept of forced labour, "which is the basis of article 7 of the Labour Code of the Republic of Kazakhstan," does not contribute to the development of the theory of law, makes it difficult to perceive it as a legal principle in the process of enforcement (Abayeldinov T.M., 2015).

Research question

The prohibition of discrimination at work is a fundamental principle of international labour law. International law against discrimination is enshrined in ILO Convention No. 111 on Discrimination in Respect of Employment and Occupation (1958) (ILO Convention No. 111). International law on non-discrimination in labour relations is reflected in existing national legislation. In accordance with article 14, paragraph 2, of the Constitution, "no one may be subjected to any discrimination on the grounds of origin, social, official or property status, sex, race, nationality, language, attitude to religion, beliefs, place of residence or any other circumstances." Thus, the inadmissibility of discrimination, including in the field of labour, directly follows from the norms of the basic law of the Republic. The constitutions of the EAEU member states also contain norms prohibiting discrimination, including in the field of labour.

In general, the interpretation of the principle of prohibition of discrimination at work, as well as the definition of discrimination in the Labour Codes of the EEU member countries, is similar and well suited to the requirements of international labour standards. The exception is the Republic of Armenia, where the Labour Code does not provide a separate norm on discrimination at work. A single reflection of this principle can be seen in Clause 3 of Article 180 of the Labour Code of Armenia: "When applying the system of qualification of work to both men and women, the same criteria should be applied, and this system should be designed in such a way as to eliminate any discrimination on the grounds of sex."

Despite the fact that the labour legislation of the EAEU member countries has incorporated the norms of international labour acts concerning the prohibition of discrimination in the sphere of work, the problem of labour discrimination exists. Discriminatory practices in the field of labour relations are

very diverse, and situations of violation of rights are numerous. It is characteristic that labour discrimination is non-violent – it is less likely to manifest itself in the form of violence, much less lead to the commission of crimes – and therefore (not just because of the scope of labour relations) it is more prevalent than other, more severe forms of discrimination.

Of course, discrimination can be caused by many factors separate for each state of the Eurasian Union, but we believe that common features can be identified in several common causes of different forms of discrimination.

The first is the lack of development of experience in the fight for the rights of citizens, workers in a situation of discrimination. And the weak development of this experience can be seen both in people, organizations and the state.

The second reason can be identified by the so-called dominance of informal practices over formal ones. This phenomenon is due to the prevalence in legislation of a large number of “dead norms,” which perform their certain tasks and functions declaratively, while in practice they do not work. In such a situation, the population recognizes the most effective adaptive strategy of social behaviour. Ordinary citizens, and employees, among others, are confident that it is necessary not to defend their rights, but to adapt to the requirements put forward by employers. The prohibition of discrimination is ignored within the framework of the dominance of the informal system of relations as the freedom of speech, freedom of organization and other rights of citizens and workers are ignored. In many cases, workers are not only not ready to resist themselves, but also refuse to support those people and organizations that are willing to defend their rights.

The third reason relates to the very nature of labour relations, namely the existing differences between workers in the labour sphere. In the field of labour relations, it is necessary to record a large number of differentiating criteria, and many of them are functionally necessary. Some criteria were found to be acceptable, while others were found to be unacceptable, that is, to give rise to discrimination.

But the main problem is that in society there is no clear idea of what discrimination is, what its manifestations are and how, and most importantly, what its harm is and why to fight it. Such representations are not available to employees, employers or other subjects of labour relations called upon to ensure the normal functioning of this sphere (representatives of the authorities, courts, law enforcement officials). Research and practical work experience show how

mixed assessments are given by a society of discrimination. Many justify less favourable stereotypical treatment of people of different appearance, the wrong sex, age, etc., and this category includes not only business representatives, but also employees themselves (Koloditskyi A., 2015).

Purpose of the study

There is no clear definition of “discrimination” in the labour legislation of the EAEU States, while article 1 of the Convention “On Discrimination in Employment and Occupation” refers to any distinction, exclusion or preference based on race, colour, sex, religion, political opinion, foreign origin or social origin resulting in the destruction or violation of equality of opportunity or treatment in employment and occupation. States, after consultation with representative employers ‘and workers’ organizations where they exist and with other relevant bodies, may establish additional prohibited criteria for discrimination. There is a significant difference between the approach of national legislators and that of the International Labour Organization. For example, the key words in article 6 of the Labour Code of the Republic of Kazakhstan are “restriction in labour rights and freedoms.” And the key words in ILO Convention No. 111 are “distinction, exclusion, preference resulting in the destruction or violation of equality of opportunity or treatment.” Thus, the TC of the Republic of Kazakhstan (in principle, like the labour legislation of other countries) treats discrimination more narrowly, as it essentially speaks only of rights, while the Convention establishes that differences lead to the destruction of equality of opportunity or treatment. It appears that the violation of equality of opportunity and the restriction of rights in practice are different things.

Under article 2 of the above-mentioned Convention, each ILO member State shall, For which the Convention is in force, “undertakes to define and implement national policies, Aimed at promoting, consistent with national circumstances and practices, Equality of opportunity and treatment in respect of employment and occupation with a view to eliminating any discrimination against them. “Agreement No. 2 of the ILO Declaration on Fundamental Principles and Rights at Work (1998), ILO member States, regardless of their ratification of the relevant ILO conventions, are obliged to respect, promote and implement the fundamental principles of labour relations, including non-discrimination in employment and occupation. Thus, we consider it necessary to add to the language of the principle of prohibition

of discrimination at work in the national legislation of the EAEU countries the “distinction, exclusion, preference leading to the destruction or violation of equality of opportunity or treatment” provided for in the ILO Convention “On Discrimination in Employment and Occupation.”

Research methods

In order to carry out a comparative analysis of the conceptual apparatus of the labour contract in the Republic of Kazakhstan, the EAEU countries, as well as other foreign countries, the method of comparative law was used, which includes a number of methods, such as micro-comparison, external comparison, normative comparison, doctrinal comparison. Micro-alignment includes systemic-structural and functional analysis of elements of such micro-objects as legal norms and their parts, articles of normative and legal acts, legal institutions (Malinovsky A.A., 2016). When using the method of external comparison, objects belonging to the legal systems of different states, such as labor legislation of the EEU countries, etc., were compared. For the purpose of comprehensive study of the concept of employment contract, definition of its definition, the method of doctrinal comparison was used, which consists in comparison of different positions of scientists on the same issues (Fletcher J., Naumov A.V., 1998). Normative comparison consists in comparison of requirements of legal norms, legislative definitions of compared normative legal acts in order to identify similarities and differences. In the course of the comparative analysis of labour norms of Kazakhstan and foreign legislation using the method of normative comparison taking into account the terminological self-declaration of definitions in the countries of

near and far abroad, it was revealed that there are no normative definitions of the employment contract in the legislation of some foreign countries.

Conclusion

Thus, on the basis of the above, it can be concluded that despite the fact that the Republic of Kazakhstan (like the rest of the EAEU countries) has ratified an important part of the ILO Conventions; The basic principles and norms formulated in these ILO conventions and recommendations are reflected in the legislation of the Republic of Kazakhstan, and some Conventions have not yet been ratified. Thus, the Republic of Kazakhstan has not ratified one of the most important ILO Conventions No. 158 “On Termination of Labour Relations,” which restrict the use of fixed-term employment contracts, which include a contract, as they generally worsen the legal situation of the employee because of the right of the employer to dismiss the employee after the expiration of the contract or if the employee refuses to conclude a contract that does not suit him. There are also other issues that need clarification. In this case, the question is rightly raised as to why, under the same conditions of ratification of international labour instruments, including the ILO Conventions, States ‘approaches to the implementation of certain international standards in national legislation differ? This issue is partly resolved by the process of harmonization of labour legislation, bringing them into something harmonious, holistic, uniform. The idea of harmonization will allow to introduce into the national labor legislation of individual EAEU countries those international labor norms and standards that for any reason were not or could not be borrowed and applied.

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CLUSTER APPROACH IN CULTURAL HERITAGE TOURISM (CASE OF THE CENTRAL ASIAN SECTION OF SILK ROAD)

Modern social and economic science pays little attention to the development of tourism based on new approaches to its management and organization. As a result, the most important sector of the economy develops in practice on the basis of not always effective traditional models. The research problem of the development of a new approach to the organization of tourism products with cross-border nature is developed in this article. The purpose was to develop a methodological toolkit for the development of cross-border tourism based on the cluster approach. To achieve this goal, the study design was based on the study of tourism features that affect the planning and clustering process. The highlighted stages of clustering in the form of identifying tourism objects, designing clusters, forming cluster structures form the basis of a new socio-economic model of the tourism industry. To design a regional cross-border tourism cluster, a method is substantiated and applied to correlate all indicators of cluster tourism development to the number of cultural and historical objects. The selected 19 indicators of development are combined into 6 groups, which make it possible to comprehensively assess the cluster organization of tourism in the region. The approbation of the indicators was carried out on the example of all five countries of the Central Asian section of the Silk Road. Model calculations of the developed set of analytical cluster indicators made it possible to combine the identified objects in each region into homogeneous clusters. In this case, Ward's method was used, and the square of the Euclidean distance was used as the objective function and criterion of similarity and difference. The proposed cluster maps make it possible to activate and increase the competitiveness of the tourism product as a whole and give impetus to socio-economic development in each country of the Central Asian region.

Key words: tourism, tourism competitiveness, social and economic development of the region, the Silk Road, tourism cluster, cluster design.

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Мәдени-тарихи туризмдегі трансшекаралық кластерлерді жоспарлау, сәйкестендіру және дамыту («Жібек жолы» Орталық Азия учаскесінің мысалында)

Қазіргі әлеуметтік-экономикалық ғылым туризмді басқаруға және ұйымдастыруға жаңа тәсілдер негізінде дамытуға онша назар аудармайды. Нәтижесінде экономиканың маңызды саласы дәстүрлі салалық модельдер негізінде іс жүзінде дамиды. Бұл саланың тиімділігі мен дамуын айтарлықтай төмендетеді. Трансшекаралық сипаттағы туристік өнімді ұйымдастырудың жаңа тәсілін әзірлеудің зерттеу проблемасы осы мақалада жасалған. Мәселенің шешімі авторлардың Жібек жолы туристік өнімінің бәсекеге қабілеттілігін күрт арттыра алатын, туристердің туристік бағыт ретінде Орталық Азия аймағына деген қызығушылығын арттыратын туристік кластерлер құру туралы ұсынысына негізделген.

Осы зерттеудің мақсаты – Орталық Азия аймағы үшін негізгі туристік өнім – Жібек жолы мысалында кластерлік тәсіл негізінде трансшекаралық туризмді дамытудың әдістемелік құралдарын жасау. Мақсатқа жету үшін оқу дизайны туризмнің жоспарлау және кластерлеу процесіне әсер ететін ерекшеліктерін зерттеуге негізделген. Туризм объектілерін анықтау, кластерлерді жобалау, кластерлік құрылымдарды қалыптастыру түріндегі кластерлеудің бөлінген кезеңдері туристік индустрияның жаңа әлеуметтік-экономикалық моделінің негізін құрайды. Аймақтық трансшекаралық туризм кластерін жобалау үшін әдіс негізделген және кластерлік туризмді дамытудың барлық көрсеткіштерін мәдени-тарихи нысандардың санына сәйкестендіруге арналған. Дамудың таңдалған 19 индикаторы 6 топқа біріктірілген, бұл аймақтағы туризмнің кластерлік ұйымдастырылуын жан-жақты бағалауға мүмкіндік береді. Көрсеткіштерді апробациялау Жібек жолының Орталық Азия учаскесінің барлық бес елінің мысалында жүргізілді. Әзірленген аналитикалық кластерлік индикаторлар жиынтығының модельдік есептеулері әр аймақта анықталған объектілерді біртектес кластер-

ге біріктіруге мүмкіндік берді. Бұл жағдайда Уордтың әдісі қолданылып, ұқсастық пен айырмашылықтың мақсаты мен критерийі ретінде Евклид қашықтығының квадраты қолданылды. Ұсынылып отырған кластерлік карталар тұтастай алғанда туристік өнімнің бәсекеге қабілеттілігін белсендіруге және арттыруға мүмкіндік береді және Орталық Азия аймағының әр елінде әлеуметтік-экономикалық дамуға серпін береді.

Түйін сөздер: туризм, туристік бәсекеге қабілеттілік, аймақтың әлеуметтік-экономикалық дамуы, Жібек жолы, туристік кластер, кластер дизайны.

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Планирование, идентификация и развитие трансграничных кластеров в культурно-историческом туризме (пример центральноазиатского участка «Шелкового пути»)

Современная социальная и экономическая наука мало уделяет внимания развитию туризма на основе новых подходов к его менеджменту и организации. В результате важнейшая отрасль экономики на практике развивается на основе традиционных моделей отрасли. Это значительно снижает эффективность и развитие отрасли. Исследовательская проблема развития нового подхода к организации туристических продуктов, имеющих трансграничный характер, развивается в данной статье. Решение проблемы основывается на предложении авторов по созданию туристических кластеров, которые способны резко повысить конкурентоспособность туристического продукта «Шелковый Путь», повысить интерес туристов к региону Центральной Азии, как туристическому направлению. Целью данного исследования является разработка методологического инструментария для развития трансграничного туризма на основе кластерного подхода на примере главного для региона Центральной Азии туристического продукта «Шелковый Путь».

Для реализации цели дизайн исследования был построен на изучении особенностей туризма, которые влияют на процесс планирования и проведения кластеризации. Выделенные этапы осуществления кластеризации в виде идентификации объектов туризма, проектирования кластеров, формирования кластерных структур составляют основу новой социально-экономической модели отрасли туризма. Для проектирования регионального трансграничного туристического кластера обосновывается и применяется способ соотнесения всех показателей кластерного развития туризма к количеству культурно-исторических объектов. Выделенные 19 показателей развития объединены в 6 групп, позволяющих комплексно оценить кластерную организацию туризма в регионе. Апробация показателей осуществлена на примере всех пяти стран центральноазиатского участка Шелкового Пути. Модельные расчеты выработанного набора аналитических кластерных показателей позволили объединить идентифицированные объекты в каждом регионе в однородные кластеры. При этом применялся Ward's method, а в качестве целевой функции и критерия схожести и различия применялся квадрат Евклидова расстояния. Предложенные кластерные карты позволяют активизировать и повысить конкурентоспособность туристического продукта в целом и дать толчок социально-экономическому развитию в каждой стране центральноазиатского региона.

Ключевые слова: туризм, конкурентоспособность туризма, социальное и экономическое развитие региона, Шелковый Путь, туристический кластер, проектирование кластера.

Introduction

The cluster approach is widely developed in many industries, including tourism. However, some types and types of tourism have significant specificity. Cultural Heritage Tourism is one of these types of tourism, which has its own characteristics. These features greatly affect the process and order of the integration of tourism resources into clusters. Unfortunately, many studies on clustering are of a general nature and cannot often answer practical questions about planning and conducting clustering.

The objectives of this study were to identify those features of cultural and historical tourism, which de-

termine the procedure and procedure for planning, creating and further developing the cluster approach in the Cultural Heritage form of tourism. Planning and organization of clusters are based on a detailed study of the planning stages and the organization of the macro cluster. This approach includes the steps of identifying potential miniclusters, their comparative analysis according to the criteria and indicators of clustering, the design of clusters directly and the creation of management by macrocluster.

The practical application for the Central Asian segment of the Silk Road will allow to develop specific indicators for planning clusters in this tourism product. The proposed indicators are applicable to

any tourist product in cultural heritage tourism. On their basis, further clustering is carried out on the basis of grouping by feature set using the SPSS software package.

Literature Review

Cultural heritage type of tourism is one of the most common types of tourism. Many other important types of tourism, for example, urban, or beach tourism, largely interact and complement cultural-historical tourism (McNulty & Koff, 2014). Millions of tourists around the world are eager to see historical monuments around the world to learn more about and see the amazing history of human development.

In this connection, naturally, that in countries with a highly developed specific weight of cultural and historical tourism there is a problem of assessing the concentration and specialization of tourism, and identifying various kinds of problems in this area. This is important from the point of view of management, state regulation and further strengthening of this profitable type of tourism (Pybum, 2004).

In recent years, the cluster approach has been actively applied in tourism as the main tool for its development. In places especially popular among tourists in many countries of the world, entire industries — clusters specializing in servicing tourists, began to emerge.

The cluster approach to the organization of tourism has become one of the most popular due to the fact that clusters contribute to the efficient use of tourism resources, increase the profitability of the territory, assessment and development of clusters in tourism (Moric, 2013; Gelbman & Timothy, 2011; Sofield, 2006; Wachowiak, 2009; Timothy, 2006).

As in any industry, cluster theory and practice in tourism has its own industry specifics. The main one's is that tourist clusters, unlike clusters in other industries, are highly dependent and tied to available tourist resources of a specific territory (Novell et al., 2006). In other words, the availability of resources is primary here, and clusters can be formed and developed only if there are valuable resources from the point of view of a tourist. They can not be artificially created if there are no attractive tourist destinations that become the basis of tourist motivation. Facilities, destinations with the highest attractiveness create a "cluster core".

However, with a deeper consideration of the cluster organization, it is impossible to deny that the application of cluster theory and practice has even deeper specificity in tourism. This is due to the fact

that tourism has many types and features within each type and form of tourism. Each type and form of tourism has its own specifics. Without these features, it is impossible to automatically apply the provisions and principles of cluster theory and methodology. In this regard, cluster theory should take them into account when evaluating, analyzing, managing, government regulation, and choosing recommendations.

Unfortunately, in literature this aspect of the study and application of clusters in tourism is poorly taken into account. In most cases, clusters in tourism are studied from the point of view of the cluster organization of tourism in general. (Cluster for Competitiveness, 2009, Segarra-Oña et al., 2011)

This general approach is similar to the approach when the economy is studied as a whole, but does not have a picture by industry. It is valid for the macro level, but it is unlikely to have significant practical benefits for the management and marketing of tourism territories and destinations, which must make decisions based on an analysis of their market sector.

From this point of view, it is important to consider some features of the clustering of the cultural heritage type of tourism, as one of the main types of tourism.

Cluster concept and cluster analysis features in tourism. Cluster, by definition of the founder of cluster theory M. Porter, is a geographically concentrated group of interconnected companies, specialized suppliers, service providers, firms in some industry, as well as related organizations competing among themselves (Porter, 1998)

Porter not only proposed a new term for defining the form of organization of the industry, but also considered clusters as an object of state regulation, which contributes to improving the competitiveness of the economy. This aspect contributed to a fairly rapid popularization of clusters not only in scientific but also in administrative circles.

The following features of cluster analysis and cluster organization in tourism in general and in cultural heritage tourism form, in particular, can be distinguished.

1. Identification of potential clusters. In classical cluster theory, analysis begins with the identification of clusters. Its essence is to determine the comparative level of development of the industry within the spatial boundaries given by analytical goals. Typically, this occurs by identifying certain signs of a cluster.

In the general case, to establish whether the study area is a cluster, there are quantitative and qualitative criteria that are widely known in the literature.

The most common are the localization coefficients proposed personally by M. Porter, the founder of the cluster approach in the economy. The territorial localization of the set of economic subjects of the main and complementary industries is obviously the best identifier for the presence of a cluster.

However, in tourism, to identify signs of a cluster, you must first allocate the availability of tourism resources. They are the main condition for the development of clusters. If there are no resources, then the development of tourism in this region will be impossible (Capon, 2004).

At the same time, the territories of clusters can be tied either to the localization of tourist resources or to administrative divisions. For example, in Spain, regional clusters with the respective cores of clusters — Malaga, Cadiz, Seville, Barcelona, etc. — are traditionally distinguished. Each of them has certain regional names: Costa del Sol, Costa del Brava, etc.

Note that in some cases, tourist resources can still be created artificially. For example, in recreational tourism it is possible to create conditions for tourism by building artificial recreation places. In golf tourism, you can create conditions by building golf courses, etc. However, in the cultural-historical type of tourism, resources are created by history and a centuries-old culture, and here it is impossible to create anything artificially to attract tourists.

Thus, the identification of clusters in tourism, unlike other industries, has a peculiarity in the form of the initial identification of tourism resources, that is, the identification of potential clusters. Actually the identification of the cluster itself will be the next stage of planning cluster and study of opportunity cluster development (Ferreira, 2003).

2. Identification of tourist clusters. At this stage, it is necessary to conduct a comparative analysis of indicators characterizing the activities of tourist regions - potential clusters. The regions with the best indicators of cluster development will be determined directly from them. In other words, these indicators should show *the degree of potential realization*. The fact is that even with a huge potential, regions may not necessarily have the best indicators of cluster development, that is, they may not necessarily become clusters.

In the general case, the realization of potential is determined by both objective and subjective factors.

The objective factors hindering the realization of potential are often indicators that are independent of the organizers or management. For example, often a cultural and historical site with a good potential for tourism may be located far from the central cities. Its availability to tourists, despite its value and at-

tractiveness, turns out to be incommensurable with the costs of achieving it. (Solvell, 2003).

In this case, the competitiveness of the object is reduced due to the presence of competitive objects of the same level of attractiveness, but in a more favorable spatial position. As an example, the widespread Al-Casaba (fortress walls) in Spain, remaining from the period of the Berber conquest, can be cited. There are dozens or even hundreds of them in Spain, in almost every city and in many villages.

A significant part of them has quite high historical value and many are listed as UNESCO sights. However, tourists who arrived, for example, in Andalusia, are not able to see them all. The choice is limited to the transport and time factor in favor of Al-Casaba, most often Granada and Malaga. But at the same time, only a very small proportion of tourists will go, for example, to Iznajar, Antequera, or Ceuta, although the fortress walls in these cities are no less valuable and no less interesting. The lack of other tourist resources that enhance tourism potential, puts them in a less competitive position compared to Malaga and Granada. A tourist does not want to go 150 km to see Al-Kasaba in Isnahar, or cross Gibraltar two times to see the fortress wall in Ceuta.

Objective factors are only limitations. But both under the conditions of the existence of objective limitations and in the conditions of their absence, the degree of realization of the potential is determined by subjective factors. Such subjective factors are the state regulation of tourism and the level of tourism management in the region.

The degree of realization of the potential will be assessed by a set of cluster indicators. Such indicators are various financial indicators characterizing the profitability of tourism, quantitative indicators of tourist flows, as well as indicators of the development of related industries, such as the hotel, restaurant, retail industry, etc.

3. The cluster design stage. At this stage, measures are being developed to enhancing the clustering of tourism. As such measures can be the development of transport, hotel, restaurant infrastructure, the development of specific and highly effective marketing technologies, an increase in the package of tourist services and resources in order to increase the attractiveness of the territory.

In particular, despite the existence of restrictions in the form of transport distance, one could recommend the search for new ways to attract tourism. With the example of the mentioned city of Ceuta, the following can be suggested. In fact, crossing Gibraltar to arrive in Ceuta, the tourist is one step from

Moroccan tourist resources. The attractiveness of Ceuta can be enhanced if Ceuta's travel companies offer a short and comfortable route to Morocco. Next to Ceuta, within a radius of 50-70 km., for example, there are such beautiful cities of Morocco as Tetouan and the famous "blue city" Chefchauen. The number of tourists in Ceuta will increase significantly if one offers to visit these Moroccan cities in one tourist package.

Similarly, in the fall when the flow of tourists to Spain dries up, tourism in such destinations that did not have problems during the peak season is sharply reduced. Cities like Ronda, Cordoba are clearly experiencing a decline in tourist traffic. But tourism could be supported if the travel of tourists from cluster's nuclei — Malaga, Seville — will be supplemented with agrarian tourism. It is during the autumn and winter period that interesting rural harvesting festivals are held in the villages that surround these cities-nuclei of clusters. A tourist will not go specifically to this festival with great desire. But if you combine two proposals - a visit to Cordoba (cultural and historical tourism) and a visit to village fairs (agricultural tourism), then the flow of willing tourists will increase dramatically.

4. The stage of formation of cluster organizational structures. Clusters are not just self-organizing systems. They need not only to be identified, but also shaped, maintained and developed. As emphasized above, the fact of localization and concentration of enterprises of a particular industry in a certain territory requires the creation of effective organizational management structures within clusters and between clusters. For this purpose, organizational associations are formed in the form of corporations, consortia, and other horizontal affiliated integrated companies with multi-divisional management structures and administrative, economic, financial mechanisms of interaction and partnership.

The implementation of the above features of tourist clusters is discussed below on the example of the tourist product "Silk Road" and specifically its Central Asian segment. On the example of the Central Asian Silk Road section, the methodological techniques and problems that may appear when attempting to identify and develop clusters based on cultural and historical tourism will be considered.

The Silk Road as a tourist product and its Central Asian section. The ancient Silk Road was the first bridge between East and West and played a key role in the development of trade between the ancient empires of China, Central and West Asia, the Indian

subcontinent and Rome. But he was not just a network of trade routes. The Silk Road promoted cultural exchange between the West and the East.

The network of routes of the Great Silk Road remains one of the most famous and long routes in the world. The figure 1 shows an enlarged network of such routes.

The Central Asian Silk Road section is one of the most important sections that covers the territories of such countries as Kyrgyzstan, Kazakhstan, Turkmenistan, Tajikistan and Uzbekistan. For some of these countries, the Silk Road is the main tourism product. In these countries local microclusters in places of significant concentration of tourism and historical and cultural monuments are created. This applies for such cities as Samarkand, Bukhara, for instance.

However, so far there is no coherent cluster picture of tourism development and about problems in this area. Clusters at the statistical level have not yet been identified, there is no clear assessment of the contribution of the each territory within the route to the tourism product. Specialists also do not have the comparative characteristics of individual territories along which the Silk Road passed.

This situation greatly complicates the overall situational picture, the identification of management problems and the development of measures for the further promotion of this product in the tourism market. Perhaps this is one of the reasons that this tourism product has not yet reached a high competitive position in the market of heritage and cultural tourism and is still poorly known in the world. In most cases, it attracts those tourists who have already visited all the main destinations of cultural and heritage tourism and are looking for unexplored tourist destinations. Central Asia remains a dark spot for them and only simple curiosity pushes them to travel to the monuments of Samarkand and Bukhara.

However, even in this case, the lack of positive emotions and low organization can play a negative role, since a positive assessment of the trip after visiting it is from a marketing point of view the most important condition for the further influx of tourists. In addition, only 2-3 cities remain as famous places of interest throughout the route, while this section, according to the most conservative estimates, has at least 12 cities and 40 cultural and historical sites in them.

Thus, the relevance of the cluster development of this product is very high.

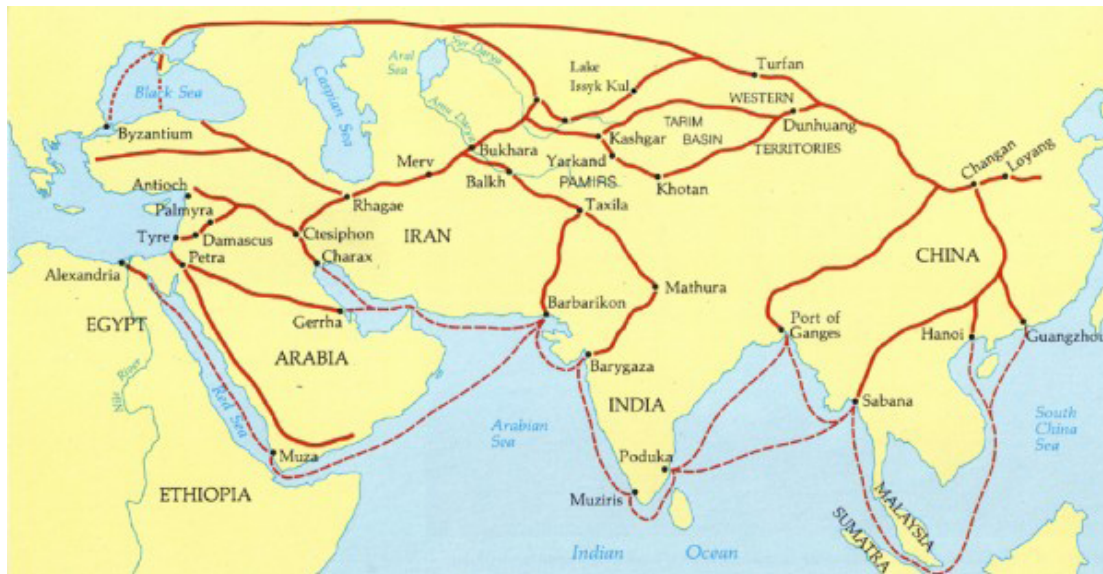


Figure 1 – Silk Road as a network of trade routes between the West and the East

<http://voices.nationalgeographic.com/2012/09/06/2012-issyk-kul-expedition-search-for-a-sunken-palace/silkroadmap/>

Materials and Methods

1. Identification of cluster potential in cultural and historical tourism

As mentioned above, the potential of cultural heritage tourism in a given region is objectively set in the form of the presence of cultural and historical objects. In essence, the available cultural and historical objects create a certain potential for the development of cultural heritage tourism. It is obvious that it is impossible to compare the potential of attraction and the scientific value of the Colosseum, or the Pantheon in Rome with the value and attractiveness of a small caravanserai in the mountains of Kyrgyzstan or the steppes of Kazakhstan.

However, the realization of the potential and the cluster level of development are ultimately determined by the quality of management and marketing, infrastructure development in the form of hotels, roads, restaurants, etc. For cultural heritage tourism it is important that this analysis allows us to estimate the level of use of tourism resources. Non-use of potential may indicate problems in the management of the tourism area and the presence of untapped reserves.

However, the methodological problem here is to determine the potential. Even to determine the number of cultural and historical sites, it is necessary to determine the criteria for selection. The potential of cultural heritage tourism will depend on this figure.

Speaking about the Central Asian section of the Silk Road, it should be noted that criteria are not used here. Each of the countries of Central Asia de-

termines the value of historical and cultural monuments according to own criteria. Therefore, it turns out that in each of these countries there are thousands of sites that are considered cultural and historical monuments. Uzbekistan names 7,000 historical monuments on its territory, Kazakhstan - about 4,000, etc. Under these conditions it is difficult to determine what is meant by them. Often these figures are voiced by archaeologists and other scientists.

Such an approach - an approach from the point of view of historians or archaeologists is absolutely unsuitable in tourism. In tourism, a customer-oriented approach should be applied. And the main customers are tourists. From this point of view, the attractiveness of cultural and historical sites can be judged by the client as a tourist. Only a tourist can say whether this object is interesting for him or not.

Thus, one of the criteria for assessing the number of cultural heritage sites can be the selection criterion for the attendance of these sites.

Another criterion, however, may be the international assessment of the cultural and historical significance of a particular object carried out by special methodologies and already available. Such estimates are made, for example, by UNESCO. Inclusion in the UNESCO list automatically means that the object has a high cultural and historical value. It has, in other words, the potential for tourists to visit it. The number of such objects is always limited and the task of management in cultural and historical tourism is to attract and acquaint humanity with such historical and cultural monuments.

2. Indicators of tourism development

Implementation of potential should be calculated in relation to the number of cultural and historical sites. In this case we are talking about indicators of cluster development. Therefore, indicators should include indicators, for example, indicators of the tourism multiplication action, indicators of the development of tourism infrastructure, etc.

These indicators will testify to the level of tourism management.

Often, in practice, one or two cultural and historical sites provide for the development of tourism to a much stronger extent than all remaining sites taken together. This happens not only as a result of lesser value of objects, but poor management. For example, in Samarkand, such an object as Registan can provide the number of tourists much more than all the other objects combined. The management factor here plays a minor role. But Registan provides the cluster effect, since multiplicatively increases interest in other objects in the area. Management must skillfully develop other destinations within the range of fast transport accessibility. This just does not happen in practice.

This effect is typical in general in the motivational scheme of this type of tourism. For example, the Alhambra in Granada (Spain) is visited mainly for the sake of the Nasrid Palace. There are long lines to visit this palace, and the tickets indicate a special time to enter in order to regulate the flow of tourists. But using the factor of the palace, the management skillfully develops tourism in the region as a whole.

As follows from the extensive literature in statistical cluster analysis, such tools are used as the index method, the analysis of absolute, relative and average values, methods of grouping and comparison. With regard to tourism, there are also systems of specific indicators, for example, the dynamics and structure of the tourist flow, the average number of days a tourist staying in the territory, the income received by enterprises of the tourism sector (total and per tourist), the number of employees employed in the tourism sector etc.

However, in this case there is a methodological task of highlighting the role of a particular type of tourism from all of these indicators. For example, the tourism region of the Costa del Sol and certain micro-sites have dozens of types of tourism. For example, in the Marbella region, beach tourism, urban tourism, golf tourism, water tourism (kayaking), wine tourism, cultural and heritage tourism are widely developed. It is very difficult to determine the contribution of each type of tourism to the creation of a cluster.

Similarly, in the Central Asian region, for example, there is the Avaza region in Turkmenistan, which is popular for the locals as a place for recreation and beach tourism. Given the general closeness of the country from foreign tourism, we can certainly assume that this region will be a tourism cluster, but the share of cultural heritage tourism in it is zero. Similarly, in Kyrgyzstan, Lake Issyk Kul is an obvious cluster, while cultural heritage tourism in the country is very poorly developed for various reasons.

The problem would be easily solved if there were statistics on the types of tourism. But modern tourism statistics do not keep separate records of tourists by types of tourism. Most often for statistics, the category of a tourist and everything related to him is important: the average time spent in the tourism zone, the average amount of expenses for the period of stay in the territory, etc.

This methodological problem can be solved in several ways.

In the first case, the territory can still upgrade tourism statistics by type of tourism. In particular, if we have data on employment and income derived from a particular type of tourism, then it would be easy to determine the contribution of each type of tourism. However, this problem requires considerable time and organizational efforts to transform statistics. The statistical agencies are poorly keeping statistics on tourism, and it is an unrealistic task to demand statistics in terms of the types of tourism.

Another way is simple data clearance. In particular, if we are talking about the allocation of clusters of cultural heritage tourism, then exclude and not take into account the territory that does not have cultural and historical monuments. Indeed, in this case, it clearly follows that tourism in the region develops due to other factors and has other source of development.

However, this option, although it seems more methodologically pure, is in fact also undesirable. On the one hand, such territories in a country where there are cultural heritage objects may turn out to be few. On the other hand, the analysis should indicate the development of tourism in general. But at the same time, the analysis should assess the impact of cultural heritage tourism and identify the contribution of this type of tourism to the general indicators of tourism.

The third seemingly simple way to solve the problem is to endow the contribution of each type of tourism to the general indicators by giving each of them a relative weight. In this case, if we want to highlight the "contribution" of cultural heritage tour-

ism, experts just give specific weight to this type of tourism in tourism statistics.

However, the disadvantage of this method is excessive subjectivity and controversial assessment. This method should not be used if there are other more or less adequate ways to assess the contribution of types of tourism.

The most appropriate method may be to relate all indicators of the cluster development of tourism to the number of cultural and historical sites.

Such an approach will comprehensively indicate the effectiveness and impact of cultural and historical sites, that is, the realization of the potential of the region in the development of cultural heritage tourism.

So grouping of cluster indicators can be carried out in the following groups.

1st group of indicators - Concentration of tourist facilities - potential competitiveness of the region;

P1 - The number of unique historical, architectural and cultural monuments in the region that are the heritage of world culture and civilization, listed in the UNESCO list

P2 - The number of monuments of cultural and historical tourism of considerable value, having a degree of recovery of not more than 50%

The second group of indicators - the concentration of the industry in the region by value and quantity indicators - the realization of potential

P3. The localization rate of tourism by employment is the ratio of the proportion of people employed in the industry to the total number of people employed in the region with the share of the same industry in the total number of people employed in the country as a whole.

P4. The coefficient of localization of income - the ratio of the proportion of income from tourism in the region's GRP with the proportion of income from tourism in the total GRP of the country

P5 Coefficient of localization of income from foreign tourists - the ratio of the share of income from foreign tourists in the income from tourism in the region with the share of income from foreign tourists in the total income from tourism in the country

P6. The coefficient of localization by the number of tourists per 1 object of cultural and historical tourism is the ratio of the number of tourists in the region per 1 object of a historical monument in the region to the number of tourists per 1 object of a historical monument in the whole country

P7 The coefficient of localization by the number of foreign tourists per 1 object of cultural heritage tourism is the ratio of the number of foreign tourists in the region per 1 object of a historical monument

in the region to the number of foreign tourists per 1 object of a historical monument in the whole country

P8. The coefficient of localization by the number of tourists per historical site listed on the UNESCO list is the ratio of the number of tourists in the region per one historical site listed on the UNESCO list to the number of tourists in the country per one historical monument listed on the UNESCO list across the country

P9 The coefficient of localization by the number of foreign tourists on one historical object listed on the UNESCO list is the ratio of the number of foreign tourists in the region per 1 historical object listed on the UNESCO list to the number of foreign tourists in the country per 1 historical monument listed on UNESCO in the whole country

The 3rd group of indicators - tourism infrastructure and tourism subjects

P10 - The number of hotel accommodations for 1 object of cultural heritage tourism;

P11 - The number of active SME in the field of tourism per 100,000 economically active population of the region;

4th group of indicators - the attractiveness of tourism in the region;

P12 - The share of investment in tourism in the total investment in the region;

P13 - The proportion of tourists visiting tourism facilities twice or more;

5th group of indicators - tourism competitiveness

P14- The number of tourists staying for 3 days or more;

P15- Percent of external tourism in the total volume of tourism;

P16- The average amount of the check, left by a tourist in the region to the average amount of the check in the country;

6th group of indicators - evaluation of the multiplicative cluster effect (development of the value chain);

P17 - Average annual (for the last 5 years) generation of the number of jobs in the field of transport services to the growth rate of the number of jobs in the region as a whole;

P18 - The average annual generation of the number of jobs in the catering industry to the growth rate of the number of jobs in the region as a whole;

P19 - The average annual generation of the number of jobs in the trade sector to the growth rate of the number of jobs in the region as a whole;

These indicators were calculated for each country of the Central Asian section of the Silk Road - Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan (Table 1)

Results and discussion

1. Data collection and analysis

The table 1 presents data from the analysis of indicators of tourism development in each of the countries of Central Asia. Data analyzed by region according to administrative division.

Data collection was the hardest part of this research, as some countries strictly regulate the availability of statistical data and published materials are available in limited editions. As a result of the tremendous work, a significant part of the data was drawn from statistical materials during 2016. However, some missing figures were calculated by indirect data from articles in the public domain.

2. Identification of clusters

Based on the selected indicators, indicators were calculated for each republic of Central Asia. Calculations were made using the SPSS package. The figures show the results of calculations.

The essence of cluster analysis is reduced to the unification of regions in fairly large groups according to the degree of their similarity. The splitting of multiple clustering objects into clusters occurs on the basis of a mathematical classification quality criterion (Gibbons et al., 2014). The clustering objects in this case are the regions. In general, the criterion for the quality of clustering should meet the following requirements:

- a) within groups, objects must be closely interconnected;
- b) objects of different groups must be far from each other;
- c) all other things being equal, the distribution of objects in groups should be uniform.

At the same time, in cluster analysis, the grouping of objects is performed not by a single parameter, but by a whole set of attributes. The advantage of cluster analysis is the absence of any restrictions on the type of objects under consideration, the absence of a priori assumptions, which allows its use for multidimensional observations. This means that as such objects of the most diverse nature can be used from answers in sociological studies to quantitative values.

Data types in cluster analysis can be interval, frequency, binary, etc. Variables should be measured only in comparable scales.

The clustering of the regions of the Central Asian region of the Silk Road was carried out by countries separately. Clustering was performed using the Ward's method (Solvell et.al., 2009). This method provides maximum accuracy and the division of the aggregate of regions into the most ho-

mogeneous from a statistical point of view of the group.

The square of the Euclidean distance was taken as the objective function, that is, the criterion of similarity and difference of clusters. This is the most common method, the essence of which is that the distance between two points i and j on the plane is calculated as an intragroup sum of squares using the formula:

$$D_{ij} = \sqrt{(x_i - x_j)^2 + (y_i - y_j)^2}$$

At each stage, these two clusters are combined, which leads to a minimal increase in the objective function.

The calculations were performed using the SPSS applied statistical analysis package.

3. Map clustering

Since the selected indicators are dissimilar necessary to make their standardization.

The software package SPSS offers several possibilities for standardization. Is the most suitable values of z-transform, which leads to standardization of all variables to a single band.

Below are consistent across countries data cluster calculations. The results of the cluster analysis are presented:

- 1) a summary report on observations;
- 2) matrix proximity (similarity);
- 2) the order of the table agglomeration;
- 3) The table belonging to the cluster;
- 4) the tree diagram (dendrogram).

Proximity matrix provides information about the similarity or difference in terms of tourism development in the regions. The lower the value, the higher the degree of similarity of the two regions and combinations in the cluster. Conversely, the more appropriate value proximity matrix, the greater the differences between the two areas (Sarik, 2011).

The tables combining each line describes the actual step of forming clusters.

A very important issue in the behavior of the cluster analysis is the problem of choosing the optimal number of clusters. Quite often, the criterion of association (number of clusters) becomes a change in the relevant functions (Gidelines for cluster, 2013). In our case, as has already been said - it is the square of the Euclidean distance.

Process grouping is performed as a consistent increase in the minimum value of the criterion. Sharp jumps integral indicators indicate the need for exceptions to this cluster and the beginning of the formation of the next.

Table 1 - Initial data for clustering regions

	The concentration of tourism facilities		Implementation of potential								Tourism infrastructure		Tourism attractions		Competitiveness of tourism				Multiplicative cluster effect		
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19		
UZBEKISTAN																					
Andijan Region	1	1	0,17	0,1	0,11	0,16	0,19	0,18	0,15	140	0,24	0,04	0,01	0,01	0,01	0,1	0,14	0,65	0,32		
Bukhara Region	7	22	1,9	2,8	2,9	2,1	2,84	2,3	2,9	145	12,8	0,31	0,22	0,12	0,39	3,8	0,8	2,5	2,9		
Fergana Region	2	12	1,1	1,23	0,7	1,9	0,72	0,68	1,1	30	1,18	0,11	0,06	0,02	0,12	1,1	0,5	0,8	0,7		
Jizzakh Region	1	1	0,24	0,29	0,11	0,21	0,19	0,17	0,06	85	0,56	0,05	0,01	0,01	0,01	0,1	0,4	0,8	0,9		
Xorazm Region	4	17	0,8	0,64	0,9	0,71	0,85	1,02	1,1	71	4,31	0,18	0,06	0,06	0,17	1,8	1,7	2,1	1,9		
Namangan Region	2	4	0,19	0,12	0,05	0,14	0,18	0,23	0,11	31	0,18	0,06	0,01	0,01	0,01	0,2	0,6	1,1	0,9		
Navoiy Region	2	8	0,28	0,19	0,12	0,23	0,02	0,21	0,31	56	0,98	0,04	0,01	0,01	0,02	0,1	0,9	0,6	0,7		
Qashqadaryo Region	1	6	0,36	0,49	0,79	0,57	0,19	0,37	0,73	77	0,91	0,13	0,05	0,03	0,18	0,8	1,3	1,4	1,7		
Karakalpakstan	-	-	0,19	0,11	0,12	-	-	-	-	-	0,4	0,01	0,01	0,01	0,01	0,05	0,9	0,7	0,4		
Samarqand Region	1	17	1,9	2,4	3,1	2,87	3,29	2,9	3,8	178	8,04	0,38	0,27	0,17	0,41	3,2	2,8	3,5	2,4		
Sirdaryo Region	-	-	0,11	0,08	0,03	0,18	0,04	-	-	-	0,89	0,01	0,01	0,01	0,01	0,07	0,6	0,3	0,7		
Surxondaryo Region	3	8	0,28	0,33	0,13	0,34	0,27	0,41	0,28	33	0,29	0,14	0,01	0,01	0,06	0,09	0,6	1,3	1,1		
Tashkent Region	2	4	0,46	0,27	0,96	0,32	0,87	0,78	0,48	43	0,33	0,07	0,01	0,01	0,03	0,2	1,3	1,6	2,1		
Tashkent	-	7	1,67	2,9	2,8	3,11	2,08	-	-	426	127,11	0,03	0,31	0,23	0,38	3,6	1,3	2,3	1,8		
TURKMENISTAN																					
Aşgabat	-	-	2,8	2,4	2,3	-	-	-	-	-	1,84	0,18	0,31	0,18	0,26	3,8	0,9	1,2	1,8		
Ahal Province	1	2	0,52	0,62	0,45	0,9	1,1	1,2	1,15	100	0,91	0,11	0,04	0,01	0,09	0,3	0,4	0,9	1,1		
Balkan Province (Abaşa_	-	-	0,9	1,8	0,1	-	-	-	-	-	1,42	0,51	0,28	0,39	0,01	0,2	1,1	1,5	1,7		
Daşoguz Province	1	1	1,1	1,7	0,9	0,95	1,26	1,08	1,21	110	0,38	0,09	0,17	0,04	0,06	0,3	0,8	1,1	1,2		

Continuation of table 1

	The concentration of tourism facilities		Implementation of potential								Tourism infrastructure		Tourism attractions		Competitiveness of tourism				Multiplicative cluster effect		
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19		
Lebap Province	-	-	0,03	0,01	0,02	-	-	-	-	-	1,91	0,02	0,01	0,04	0,01	0,01	0,3	0,7	0,9		
Mary Province	1	1	0,8	1,2	1,5	1,12	0,95	1,15	0,86	40	0,18	0,19	0,03	0,06	0,06	1,3	1,2	1,3	1,61		
TADJIKISTAN																					
Sughd (Khujand, Пенжикент)	1	5	1,8	2,3	1,8	0,5	1,5	2,0	2,4	40	0,1	0,08	0,02	0,04	0,09	0,2	0,2	1,2	1,1		
Region of Republican Subordination	-	1	0,2	0,3	0,9	0,4	0,6	-	-	10	0,12	0,03	0,02	0,07	0,05	0,1	0,2	0,3	0,5		
Khatlon	-	5	0,6	0,42	0,6	0,4	1,17	-	-	32	0,1	0,12	0,03	0,04	0,18	0,24	0,8	0,7	1,1		
Gorno-Badakhshan	-	-	0,2	0,9	1,3	-	-	-	-	-	0,2	0,03	0,04	0,07	0,21	0,13	0,9	0,2	0,4		
Dushanbe	-	-	1,3	1,9	1,4	-	-	-	-	-	12,3	0,21	0,39	0,42	0,27	3,7	1,4	1,6	1,4		
KYRGYZSTAN																					
Biskek	-	-	1,2	2,1	1,2	-	-	-	-	-	28,6	0,19	0,29	0,21	0,17	2,9	1,5	1,7	1,4		
Batken	-	2	0,2	0,1	0,28	0,1	0,05	-	-	4	0,5	0,02	0,05	0,06	0,06	0,04	0,6	0,3	0,2		
Chu	3	9	0,1	1,4	0,2	0,6	1,6	1,0	1,0	8	0,28	0,07	0,06	0,19	0,19	0,46	0,9	1,3	1,2		
Jal-al-abad	-	2	0,1	0,3	0,35	0,22	0,4	-	-	21	0,32	0,09	0,24	0,08	0,23	0,51	0,7	1,4	1,52		
Naryn (Tash Rabat)	-	2	0,1	0,2	0,02	0,07	0,05	-	-	5	0,27	0,03	0,05	0,04	0,07	0,28	0,9	0,5	0,7		
Osh	-	5	0,2	0,3	0,3	0,7	0,83	-	-	16	0,61	0,19	0,19		0,11	1,1	1,2	1,3	1,4		
Talas	-	2	0,05	0,1	0,23	0,2	0,38	-	-	17	0,15	0,02	0,06	0,06	0,04	0,05	0,6	0,53	0,49		
Issyk-Kul	-	-	3,0	3,8	2,4	-	-	-	-	-	2,1	0,48	0,38	0,48	0,42	3,9	1,3	1,7	1,9		

Continuation of table 1

	The concentration of tourism facilities		Implementation of potential							Tourism infrastructure		Tourism attractions		Competitiveness of tourism				Multiplicative cluster effect			
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19		
Osh sity	-	6	0,2	0,9	1,9	0,35	0,92	-	-	19	2,67	0,13	0,19	0,16	0,18	1,4	1,3	1,1	1,4		
KAZAKSTAN																					
Akmolinskaya	-	-	0,1	0,7	0,15	-	-	-	-	-	6,1	0,29	0,06	0,01	0,03	0,81	3,9	0,4	0,7		
Aktubinskaya	-	-	0,03	0,01	0,01	-	-	-	-	-	8,7	0,02	0,04	0,01	0,01	0,23	0,3	0,2	0,4		
Almatinskaya	3	3	0,9	1,2	0,21	0,23	0,12	0,2	0,1	764	1,75	0,08	0,03	0,01	0,03	0,13	1,4	0,4	1,6		
Atyrauskaya	-	-	0,02	0,02	0,01	-	-	-	-	-	12,3	0,01	0,02	0,01	0,01	0,16	1,2	0,3	0,4		
Vostochno-Kazakstanskaya	-	-	0,4	0,7	0,12	-	-	-	-	-	4,9	0,11	0,08	0,18	0,01	0,11	0,7	0,3	0,5		
Jambilskaya	6	7	0,1	0,3	0,23	0,17	0,05	0,3	0,1	41	1,9	0,04	0,02	0,01	0,01	0,16	0,4	0,7	0,65		
Karagandinskaya	-	-	0,3	0,35	0,18	-	-	-	-	-	13,1	0,04	0,03	0,01	0,01	0,12	1,1	0,6	0,5		
Kostanayskaya	-	-	0,02	0,04	0,01	-	-	-	-	-	1,3	0,01	0,02	0,01	0,01	0,11	0,5	0,3	0,2		
Kzil Ordinskaya	-	-	0,05	0,11	0,13	-	-	-	-	-	3,1	0,02	0,02	0,01	0,01	0,18	0,8	0,4	0,34		
Mangistauskaya	-	2	0,19	0,58	0,16	0,05	0,4	-	-	480	2,6	0,02	0,05	0,11	0,01	0,27	0,5	0,4	0,3		
Severo-Kazakstanskaya	-	-	0,03	0,05	0,02	-	-	-	-	-	2,3	0,02	0,01	0,01	0,01	0,18	0,3	0,3	0,28		
Palodarskaya	-	-	0,04	0,32	0,04	-	-	-	-	-	3,0	0,02	0,02	0,01	0,01	0,17	0,4	0,5	0,3		
Yujino-Kazakstanskaya	1	2	1,23	1,4	0,18	0,9	0,5	3,1	3,2	653	2,8	0,23	0,08	0,36	0,03	0,39	1,4	1,6	1,3		
Zapadno-Kazakstanskaya	-	-	0,06	0,12	0,03	-	-	-	-	-	2,3	0,02	0,01	0,01	0,01	0,16	0,2	0,23	0,31		
Almaty sity	-	-	-	-	-	-	-	-	-	-	27,8	0,32	0,14	0,38	0,08	3,9	2,9	2,6	3,5		
Astana	-	-	1,1	1,5	4,9	-	-	-	-	-	30,4	0,14	0,32	0,36	0,15	4,2	3,7	3,2	3,4		

Test results are shown in the cluster maps of each republic (figures 2-6). On maps marked increase in the level of clustering in color. The maximum level of clustering is marked dark color.

Table 2 - The order of agglomeration (clusters) in Tajikistan

Stage	Combined cluster		Coefficients	Stage cluster first appearance		Next stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	2	4	5,178	0	0	2
2	2	3	14,431	1	0	3
3	1	2	41,973	0	2	4
4	1	5	76,000	3	0	0

Table 3 - The order of agglomeration (clusters) in Turkmenistan

Stage	Combined cluster		Coefficients	Stage cluster first appearance		Next stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	1	2	14,278	0	0	2
2	1	3	36,000	1	0	0

Table 4 - Proximity matrix of Uzbekistan*

Case	Euclidean distance squared										
	1:Andj	2:Bkhara	3:Ferg	4:Jizak	5:Xrzm	6:Nmngn	7:Nvyi	8:Qsqdr	9:Smarq	10:Srhdr	11:Tskt
1:Andj	,000	114,844	17,828	1,853	30,708	9,433	5,334	11,541	129,954	9,432	13,995
2:Bkhara	114,844	,000	67,456	108,779	43,291	101,041	103,078	76,870	25,747	90,234	84,891
3:Ferg	17,828	67,456	,000	13,105	13,351	9,991	9,788	9,466	83,871	8,456	12,549
4:Jizak	1,853	108,779	13,105	,000	24,306	5,152	2,292	6,725	124,165	4,575	7,201
5:Xrzm	30,708	43,291	13,351	24,306	,000	16,577	18,308	9,416	57,969	13,322	11,914
6:Nmngn	9,433	101,041	9,991	5,152	16,577	,000	1,669	7,748	121,571	1,961	7,177
7:Nvyi	5,334	103,078	9,788	2,292	18,308	1,669	,000	6,273	120,932	2,518	6,542
8:Qsqdr	11,541	76,870	9,466	6,725	9,416	7,748	6,273	,000	83,390	5,344	3,728
9:Smarq	129,954	25,747	83,871	124,165	57,969	121,571	120,932	83,390	,000	111,292	96,374
10:Srhdr	9,432	90,234	8,456	4,575	13,322	1,961	2,518	5,344	111,292	,000	4,675
11:Tskt	13,995	84,891	12,549	7,201	11,914	7,177	6,542	3,728	96,374	4,675	,000

This is a dissimilarity matrix*

Table 5 - The order of agglomeration (clusters) in Uzbekistan

Stage	Combined cluster		Coefficients	Stage cluster first appearance		Next stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	6	7	,835	0	0	3
2	1	4	1,761	0	0	7
3	6	10	2,976	1	0	5
4	8	11	4,840	0	0	5
5	6	8	10,454	3	4	7
6	3	5	17,129	0	0	9
7	1	6	24,557	2	5	9
8	2	9	37,430	0	0	10
9	1	3	51,124	7	6	10
10	1	2	190,000	9	8	0

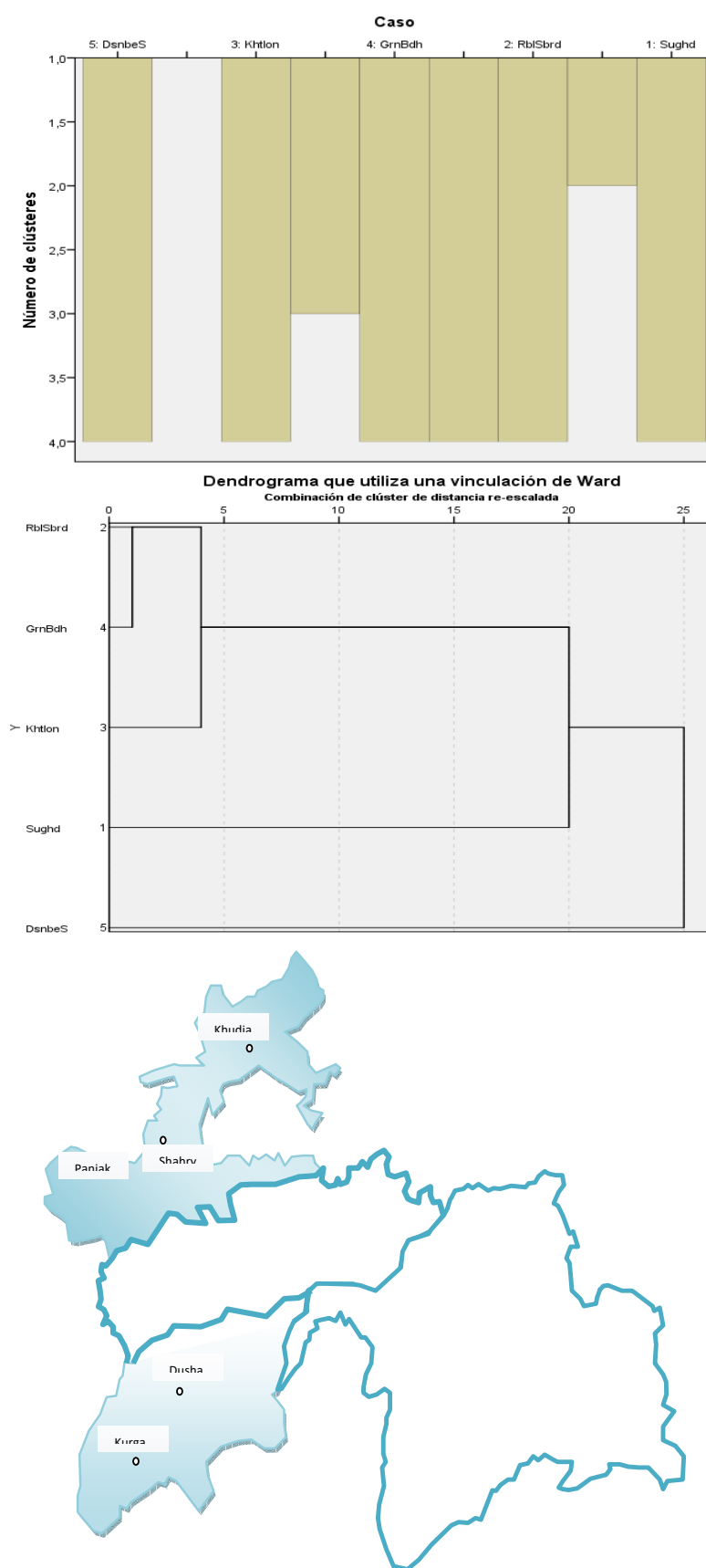


Figure 2 – Map clustering of Tajikistan

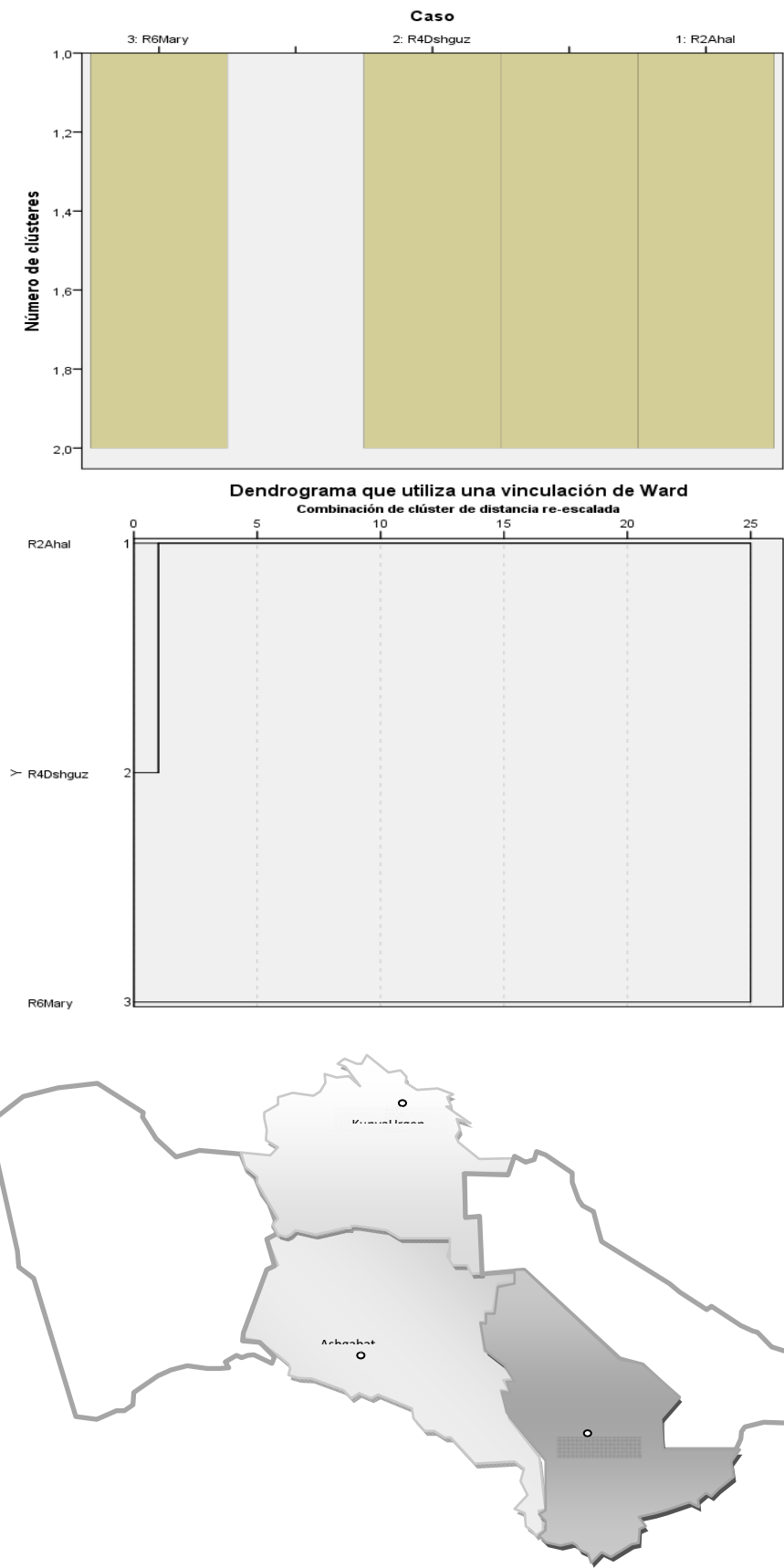


Figure 3 – Map clustering of Turkmenistan

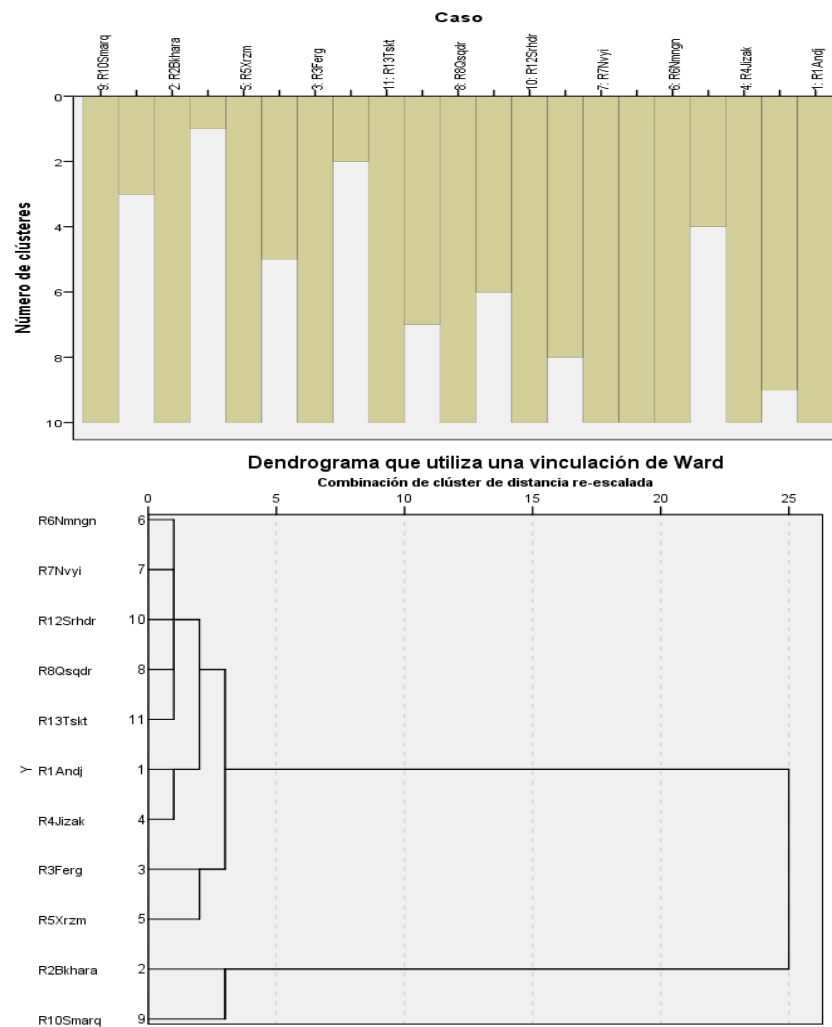


Figure 4 - Map clustering of Uzbekistan

Table 6 - Proximity matrix of Kyrgyzstan *

Case	Euclidean distance squared								
	1:Naryn	2:Batken	3:Chu	4:Talas	5:Osh	6:Oshsity	7:Jllbad	8:Bshkek	9:Issykkul
1:Naryn	,000	1,974	51,295	3,851	19,009	22,057	14,898	36,814	79,505
2:Batken	1,974	,000	55,648	3,490	25,877	28,347	19,928	45,315	88,003
3:Chu	51,295	55,648	,000	49,462	37,774	39,905	46,349	74,663	102,741
4:Talas	3,851	3,490	49,462	,000	17,473	20,463	11,997	47,069	90,038
5:Osh	19,009	25,877	37,774	17,473	,000	7,914	10,055	35,811	68,461
6:Oshsity	22,057	28,347	39,905	20,463	7,914	,000	11,292	28,238	50,692
7:Jllbad	14,898	19,928	46,349	11,997	10,055	11,292	,000	32,565	59,424
8:Bshkek	36,814	45,315	74,663	47,069	35,811	28,238	32,565	,000	29,603
9:Issykkul	79,505	88,003	102,741	90,038	68,461	50,692	59,424	29,603	,000

This is a dissimilarity matrix*

Table 7 - The order of agglomeration (clusters) in Kyrgyzstan

Stage	Combined cluster		Coefficients	Stage cluster first appearance		Next stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	1	2	,987	0	0	2
2	1	4	3,105	1	0	6
3	5	6	7,062	0	0	4
4	5	7	12,859	3	0	6
5	8	9	27,660	0	0	8
6	1	5	51,239	2	4	7
7	1	3	86,095	6	0	8
8	1	8	152,000	7	5	0

Table 8 - Proximity matrix of Kazakhstan *

Case	Squared Euclidean Distance															
	Akmol	Aktyub	Almskaya	Atyrau	VKO	Jambyl	Krgnsky	Kostany	Kzordsk	Mgstskya	SKO	Pvdrskya	YKO	ZKO	Almaty	:Astana
Akmol	,000	18,281	30,784	15,437	12,672	44,053	13,257	18,268	15,702	27,381	18,589	16,802	88,625	18,755	36,398	83,444
Aktyub	18,281	,000	29,644	,806	5,384	29,536	1,838	,825	,722	13,807	,677	,960	97,167	,715	52,623	107,968
Almskaya	30,784	29,644	,000	29,689	22,486	24,887	24,392	29,160	27,471	16,600	28,979	26,532	57,099	28,183	69,565	98,286
Atyrau	15,437	,806	29,689	,000	6,413	30,569	1,138	1,837	1,203	14,891	1,808	1,902	97,477	1,983	49,465	104,349
VKO	12,672	5,384	22,486	6,413	,000	32,115	3,841	5,731	4,900	12,955	5,649	4,270	78,455	5,246	45,443	87,893
Jambyl	44,053	29,536	24,887	30,569	32,115	,000	30,261	28,919	28,635	30,313	28,796	28,370	93,537	28,734	80,484	131,581
Krgnsky	13,257	1,838	24,392	1,138	3,841	30,261	,000	3,073	1,990	13,891	2,903	2,087	88,744	2,831	46,449	92,775
Kostany	18,268	,825	29,160	1,837	5,731	28,919	3,073	,000	,177	13,361	,075	,417	97,105	,153	58,380	114,475
Kzordsk	15,702	,722	27,471	1,203	4,900	28,635	1,990	,177	,000	13,024	,237	,300	94,629	,317	54,173	107,998
:Mgstskya	27,381	13,807	16,600	14,891	12,955	30,313	13,891	13,361	13,024	,000	13,395	12,415	67,134	13,135	63,893	108,981
:SKO	18,589	,677	28,979	1,808	5,649	28,796	2,903	,075	,237	13,395	,000	,361	96,756	,038	57,533	114,394
:Pvdrskya	16,802	,960	26,532	1,902	4,270	28,370	2,087	,417	,300	12,415	,361	,000	93,089	,297	55,568	107,997
:YKO	88,625	97,167	57,099	97,477	78,455	93,537	88,744	97,105	94,629	67,134	96,756	93,089	,000	95,966	107,591	130,593
:ZKO	18,755	,715	28,183	1,983	5,246	28,734	2,831	,153	,317	13,135	,038	,297	95,966	,000	58,280	114,101
:Almaty	36,398	52,623	69,565	49,465	45,443	80,484	46,449	58,380	54,173	63,893	57,533	55,568	107,591	58,280	,000	45,309
:Astana	83,444	107,968	98,286	104,349	87,893	131,581	92,775	114,475	107,998	108,981	114,394	107,997	130,593	114,101	45,309	,000

This is a dissimilarity matrix

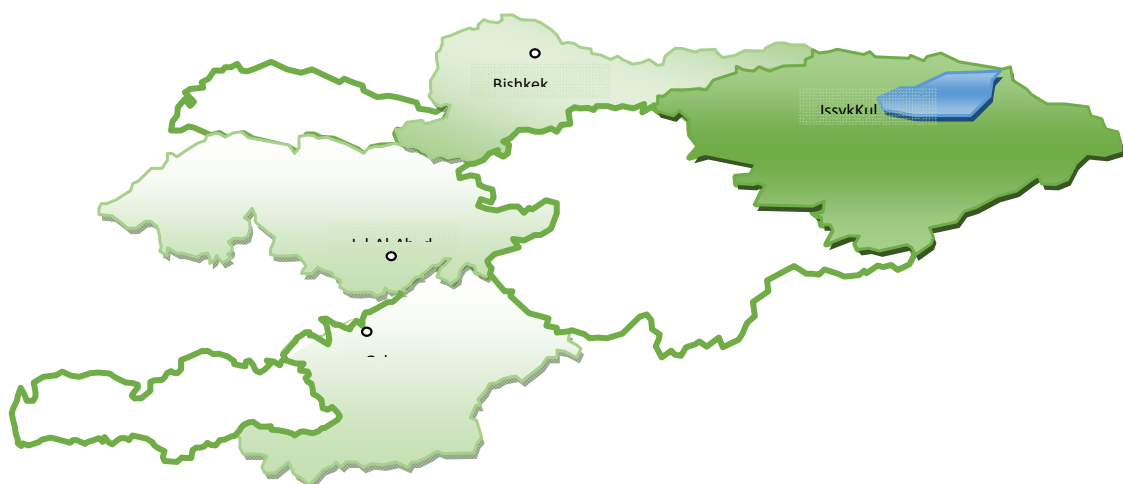
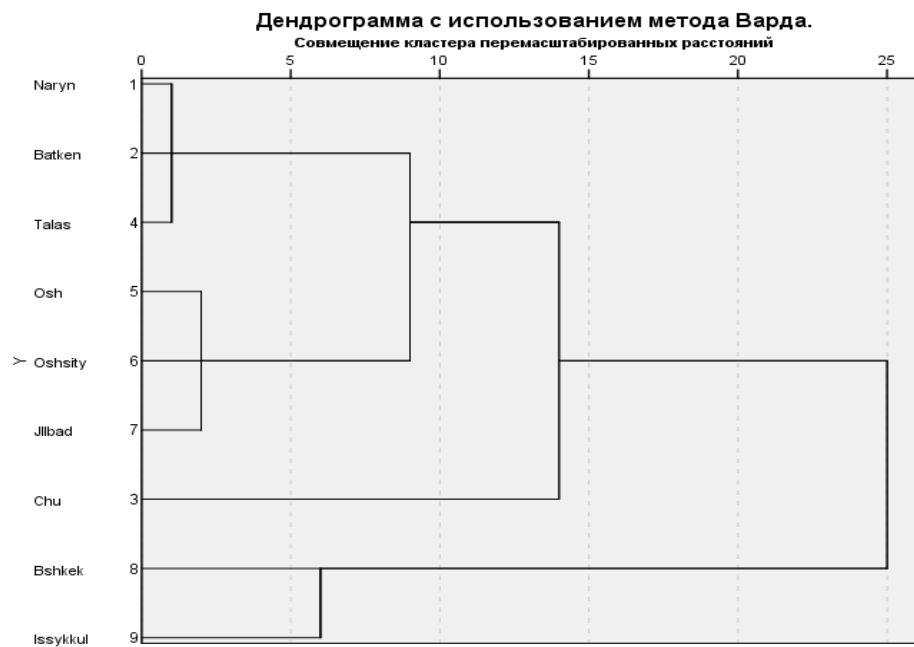
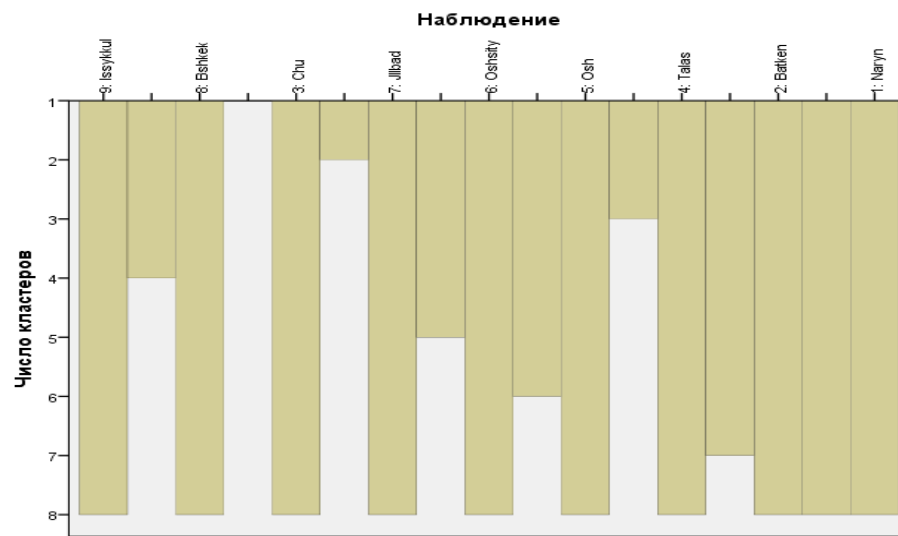


Figure 5 - Map clustering of Kyrgyzstan

Table 9 - The order of agglomeration (clusters) in Kazakhstan

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	11	14	,019	0	0	2
2	8	11	,089	0	1	4
3	9	12	,239	0	0	4
4	8	9	,475	2	3	7
5	2	4	,877	0	0	6
6	2	7	1,735	5	0	7
7	2	8	3,959	6	4	8
8	2	5	8,123	7	0	10
9	3	10	16,423	0	0	11
10	1	2	30,387	0	8	13
11	3	6	46,020	9	0	13
12	15	16	68,674	0	0	14
13	1	3	101,749	10	11	15
14	13	15	173,592	0	12	15
15	1	13	285,000	13	14	0

4. Spatial design clusters

As follows from the analysis, in the Central Asian segment of the Silk Road, the existing prototypes of clusters are of a rudimentary nature and cannot yet be called fully clusters. The only exceptions are Samarkand and Bukhara microclusters. Other regions that have sufficiently attractive tourist resources cannot boast of a high level of tourism development and are far behind these two leading regions.

Most often, the “narrow” places for the development of clusters are

- weak development of the hotel sector and lack of space during periods of high demand;
- poor transport development, leading to the shortage of tourism resources in the high season;
- undeveloped transport infrastructure, including low capacity of stations and terminals, lack of good roads.

The most significant problem for the development of cultural heritage tourism in the region of the Central Asian Silk Road is the lag in the development of transport infrastructure and roadside service. In all countries of Central Asia there are no budgetary messages in the form of budget airlines. Bus services are often not equipped with modern buses with a high level of comfort.

Low bandwidth of stations and terminals, inconsistency of infrastructure with international standards is another problem. For example, in Russia,

almost all large cities are connected with many cities of the world, which allows attracting tourists to them. In the centers of microclusters of Central Asia, with the exception of Samarkand, there are either no major airports or they are not loaded due to the lack of international flights. In particular, the airports of Shymkent, Khiva, Urgench remain unloaded, which indicates their low competitiveness as tourist destinations.

For this reason, the occupancy rate of hotels is still low, and the prices for their services are quite high. So, even in the high season, the occupancy rate of Almaty hotels reaches only 60% and decreases to 30% in winter.

Some countries of Central Asia are still characterized by a very low level of development of communications, Internet technologies, banking technologies, and currency exchange. In particular, this applies to Uzbekistan, Tajikistan, and Turkmenistan.

For the development of cultural and historical tourism, in addition to the availability of unique tourism resources, a convenient geographical location and infrastructure, a social factor is important. It is about the general social atmosphere in the region, the hospitality and friendliness of the local population to foreign tourists, foreign investments. From this point of view, these countries have the following obstacles to the development of tourism:

- lack of qualified personnel in the industry;

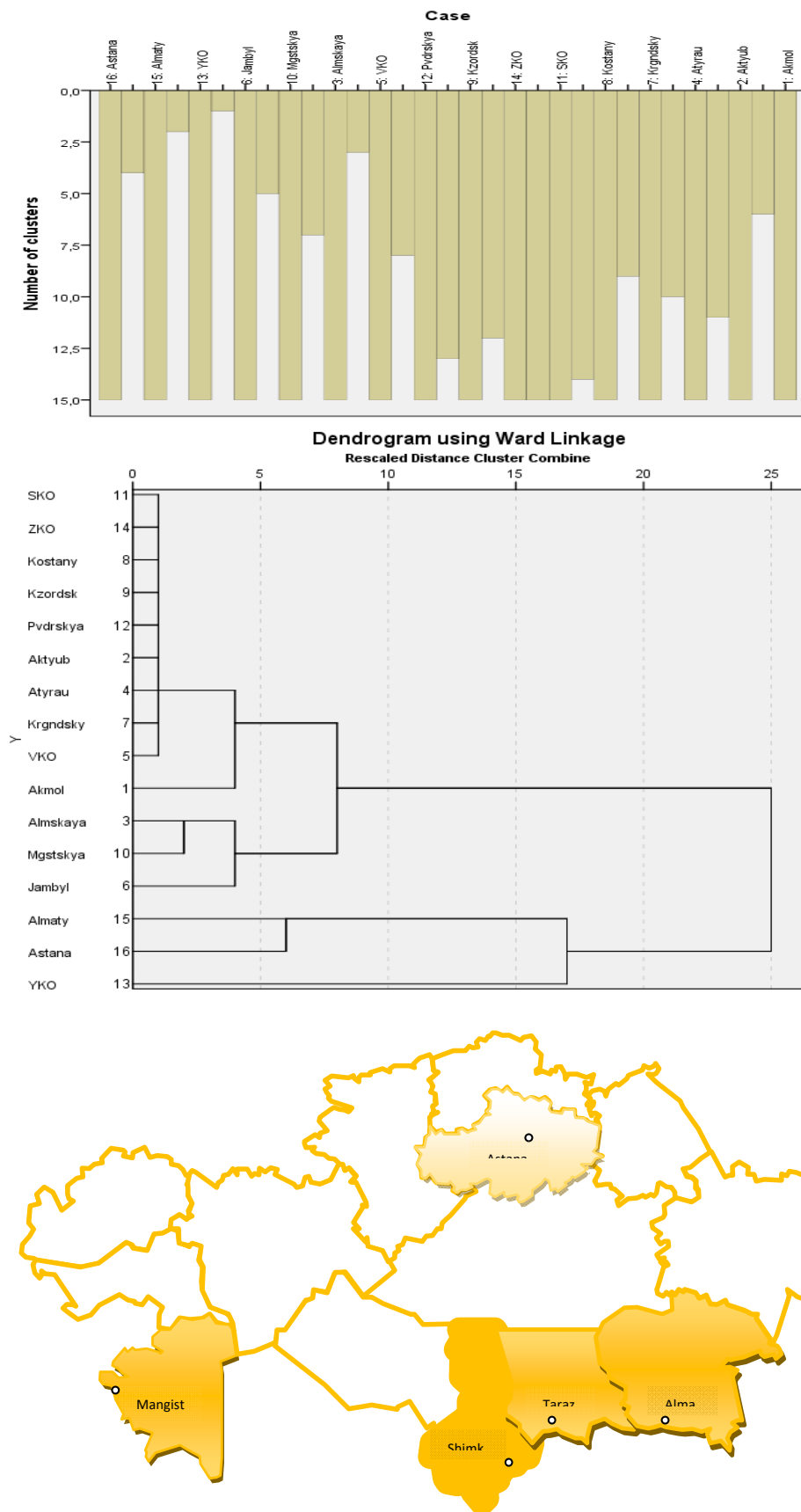


Figure 6 - Map clustering of Kazakhstan

- weak development of general and specialized infrastructure;
- weak development of private property in some countries and difficulties in obtaining cheap loans, privately owned land for the development of infrastructure facilities;
- difficulty in obtaining visas (Turkmenistan, Uzbekistan, Tajikistan);
- many administrative obstacles in the form of difficulties in obtaining a visa, compulsory escort of tourists by representatives of the state, bans on photographing, etc.;
- high level of corruption and bureaucracy, which discourages foreign tourists

At the same time, it should be noted that the cluster approach does not provide a complete picture of the situation. They show a comparative picture between regions. Indicators in this case show only the situation relative to each other. Therefore, a relative analysis must necessarily be supplemented by an analysis of absolute indicators and their dynamics. For example, indicators of the dynamics of revenue growth, attracting tourists and others will show the real attractiveness of tourism facilities.

Judging by the set of indicators given above, it should be assumed that the real clustering of tourism in the countries of Central Asia did not happen. Low levels of realization of potential for the development of tourism, infrastructure, administrative barriers and other obstacles become a brake on clustering processes.

The creation of cluster networks will lead to a sharp increase in the competitiveness of this section of the Silk Road, as a macro cluster and effective management will give impetus to the realization of the potential of tourism resources.

To this end, a number of socio-economic measures to support cluster development should be implemented:

1. Promoting the decentralization of the management of tourism resources and the development of horizontal autonomous management structures that interact according to the network principle.
2. Global strategic positioning and transition to global marketing. The cultural-historical cluster should be positioned on the world market of cultural-historical monuments and world culture. Clusters must go beyond their borders and compete in the global market.

4. Change of object of control, implying a transition from the sphere of management of the industry and companies to the management of territories

Conclusion

In recent years, there is an active development of clusters in tourism. This is facilitated by the active spread of the cluster approach, which has received significant development in industry.

At the same time, an analysis of the literature on tourism clustering showed that, more often than not, researchers automatically transfer industrial clustering methods to the tourism industry. Such blind copying is methodologically wrong. In particular, such a sub-industry of tourism as cultural heritage tourism has many features. These features both contribute to the development of clusters, and require special clustering techniques due to the strong territorial dispersion and different value of the tourism object.

The analysis showed what features should be used, how they can be affected by clustering. The designed stages of the clustering are capable of ensuring the planning of the clustering process and its organizational design.

The clustering method in cultural heritage tourism has been tested on the Central Asian segment of the Silk Road. This segment has great potential. However, its development is still significantly inhibited. Clustering will ensure a sharp breakthrough in the development of this tourist product.

The clustering of the regions of the Central Asian region of the Silk Road was carried out by countries separately. Clustering was done using the Ward's method. This method provides maximum accuracy and the division of the aggregate of regions into the most homogeneous from a statistical point of view of the group.

The square of the Euclidean distance was taken as the objective function, that is, the criterion of similarity and difference of clusters. At each step, these two clusters are combined, which lead to a minimal increase in the objective function.

The calculations were performed using the SPSS applied statistical analysis package.

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