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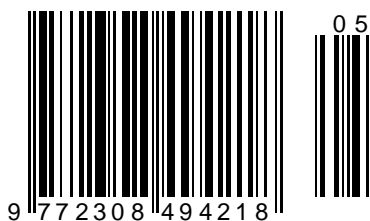
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FEATURES OF FORMATION OF CONSUMER DEMAND FOR DEMANDED PRODUCTS IN CONDITIONS OF AN UNSTABLE MARKET

Abstract: In the article, the authors formulated the need for the formation of demand for products in demand, when the assortment policy is the main factor of this demand. At the same time, consumer preferences in any case should be formed taking into account a certain set of requirements that they impose on the product. In this case, manufacturers guarantee themselves a stable financial condition, stable TPP, demand and its full implementation.

Key words: Consumer demand, demand for products, consumer preferences, financial condition, stable TEP, assortment, assortment policy.

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Introduction

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The essence of our position lies in a new perspective of perception in the management of the quality of consumer goods - consumer interest, more precisely, in the transformation of the consumer from a buyer into a "producer". As long as the consumer is left to himself, self-formed in the market environment perverted by an unscrupulous manufacturer and advertising in an unregulated by responsibility market environment, he is a statistic for a responsible manufacturer.

All plans of the manufacturer are based on statistical models, more or less indicative on the scale of the national economy, but not on the average

capabilities of enterprises. In order to replace virtual, speculative benchmarks in planning with real, significantly more viable ones, it is necessary to lead the consumer out of the zone of unlikely certainty into the space of cooperation, which gives a much more probabilistic forecast. From a spontaneous, opposing, separate "counter" subject, turn into an accomplice through the education and enlightenment of his consciousness.

The trouble of our present state is not in the Chinese commodity expansion - the Chinese have flooded the United States and half of the world with their specific goods, but in the fact that we have left the consumer at the mercy of intermediaries.

Formally, such an alienation in Russia during the Yeltsin era looked quite logical and attractive: "to each his own!" The shoemaker sews what he needs - boots, shoes, sneakers, etc.; the merchant is busy with his business - the sale of goods; advertising has its profit by helping the merchant. And everyone tried to "shoe" consumers.

In reality, however, the manufacturer found himself in isolation, submitting not to the market, but to market speculators and those who are in their service. The market is a relationship within the "producer-consumer" system. Anything built in between them breaks their natural relationship. Leading European manufacturers do not allow themselves to supply products to our market. They enter the market themselves, with their own network of specialized stores, which are under strict control and carry out independent advertising work with the consumer. By replacing the "consumer" with the "intermediary - the buyer", the enterprise creates an uncertain perspective.

The producer has a consumer, not a buyer, by his dialectical opposite. The consumer also needs to be connected to the problem of technical regulation - to teach him industrial literacy, educate, educate. We need to revive knowledge universities for the consumer in a new form.

Main part

The first legal and organizational foundations for the formation of the Customs Union were determined in the second half of the 1990s, when the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation adopted the Agreement on the Customs Union of January 6, 1995, the Agreement on the Customs Union of January 20, 1995 and the Treaty on the Customs Union and Common Economic Space dated February 26, 1999, which were generally of a framework, declarative nature. These international treaties have determined the goals, principles and mechanism of the Customs Union, the stages of its creation. However, the direct formation and development of the international legal framework and the institutional framework of the Customs Union began in 2007, when the EurAsEC Interstate Council

within the framework of three states - the Republic of Belarus,

The Customs Union of Belarus, Kazakhstan and Russia was formed in accordance with the goals and objectives of the Treaty on the Eurasian Economic Community. Three out of five states at the first stage (in accordance with the decision of the EurAsEC Interstate Council) from October 6, 2007, began to form the Customs Union and the Common Economic Space, taking into account that these states are the closest to each other in terms of their economic development. Later, Uzbekistan joined the legal framework of other EurAsEC member states - Kyrgyzstan, Tajikistan.

The Customs Union of Belarus, Kazakhstan and Russia provides for a single customs territory, within which customs duties and economic restrictions are not applied in the mutual trade of goods originating in a single customs territory, as well as originating from third countries and released for free circulation in this customs territory. , with the exception of special protective, anti-dumping and countervailing measures. On the territories of the CU member states, a unified customs tariff and other unified measures to regulate trade in goods with third countries are applied.

The Customs Union within the EurAsEC (CU) became the basis for the formation of the Common Economic Space (CES). The CES is a qualitatively deeper form of integration, which provides for the free movement of not only goods, but also services, capital, labor resources in the common customs territory of the CU. For this, along with the unification of foreign trade regulation norms, the parameters of macroeconomic policy, the tax system, the norms of antimonopoly and labor legislation, and migration policy should be harmonized.

The regulation of these integration processes required the creation of its own institutional system, i.e. bodies empowered to adopt international treaties and other normative legal acts (rules, regulations, recommendations), by their decisions.

In accordance with Article 1 of the Treaty on the Eurasian Economic Commission of November 18, 2011, the Parties established the EEC as a single permanent regulatory body of the Customs Union and the Common Economic Space.

The Commission consists of the Council of the Commission and the Board of the Commission. The procedure for the activities of the Council and the Board is regulated by the Rules of Procedure of the Commission, approved by the Supreme Eurasian Economic Council at the level of heads of state. As part of its activities, the Commission has the right to form structural divisions (hereinafter referred to as the Commission's Departments), representations of the Commission in the Parties, by decision of the Supreme Eurasian Economic Council at the level of heads of

state in third countries and their associations, as well as at international organizations.

The EEC, within the limits of its powers, makes decisions that are binding on the Parties, and recommendations that are not binding. These decisions are included in the legal framework of the Customs Union and the Common Economic Space and are subject to direct application in the territories of the CU member states.

The Council consists of one representative from each Party, who is a deputy head of government, endowed with the necessary powers, in accordance with the legislation of the respective Party. Meetings of the Council are held as needed, but at least once a quarter. The time and place of the next meeting of the Council are determined at the previous meeting of the Council.

A significant step in the development of the institutional framework of the Customs Union was taken on December 12, 2008.

In order to further form the institutional framework of the Customs Union at the level of heads of government, the Agreement on the Secretariat of the Customs Union Commission was adopted. This is a working body of the Commission, the main function of which is the organizational and legal support of its activities. The Rules of Procedure of the Customs Union Commission were also approved, establishing the procedure for preparing and holding meetings of the Commission, the procedure for making decisions, publishing them and coming into force. The new edition of these Rules of Procedure was approved at a meeting of the Supreme Body of the Customs Union on November 27, 2009.

In the period from October 6, 2007 to November 18, 2011, the system of bodies of the Customs Union was presented as follows:

− Interstate Council of the Eurasian Economic Community

(The supreme body of the Customs Union).

− Customs Union Commission.

− Court of the Eurasian Economic Community.

Also, four structures were created that are not part of the CU system, but perform a number of important functions that ensure its functioning:

− Expert advice within the framework of the Customs Union.

− Foreign Trade Regulation Committee.

− Coordination Committee for Technical Regulation, Application of Sanitary, Veterinary and Phytosanitary Measures.

− Information Technology Coordination Council.

The Board of the Commission is the executive body of the Commission, which develops proposals in the field of further integration within the framework of the Customs Union and the Common Economic Space. The Board of the Commission consists of 9 members, one of whom is the Chairman of the Board of the Commission. The composition of the Board of the Commission is formed on the principle of 3 members of the Board of the Commission from each member state of the CU, who are appointed by the decision of the Supreme Eurasian Economic Council and work on a permanent basis in the Board for 4 years.

The activities of the Supreme Eurasian Economic Council, the Council of the Commission and the Board of the Commission are supported by international employees of the departments of the Commission.

In the field of customs-tariff and non-tariff regulation, the EurAsEC Interstate Council approved the unified Commodity Nomenclature of Foreign Economic Activity of the Customs Union (TN VED CU) and the Unified Customs Tariff of the Customs Union (ETT CU). The heads of state also decided to transfer to the CCC a number of important functions in the field of customs-tariff and non-tariff regulation, provided for by the relevant international treaties of the Customs Union, in particular, the maintenance of the CCC of the CU.

In the field of consumer protection, the Supreme Body of the Customs Union made a decision to endow the EurAsEC Court with the functions of resolving disputes within the CU.

At the same time, the Expert Council became a mechanism for direct appeal against the Commission's actions, which was empowered to consider applications of legal entities and individuals of the Customs Union member states engaged in economic activities on the compliance of decisions of the CCC with its legal framework.

The Customs Union, the main foreign policy project of Russian President Vladimir Putin, has been developing rapidly in recent years, moving towards its ultimate goal - transformation into the Eurasian Economic Union in early 2015. But the union's status as a potential rival to the European Union creates pressure on countries like Armenia, Moldova and Ukraine to make a choice.

The first legal and organizational foundations for the formation of the Customs Union were determined in the second half of the 1990s, when the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation adopted the Agreement on the Customs Union of January 6, 1995, the Agreement on the Customs Union of January 20, 1995 and the Treaty on the Customs Union and Common Economic Space dated February 26, 1999, which were generally of a framework, declarative nature. These international treaties have determined the goals, principles and mechanism of the Customs Union, the stages of its creation. However, the direct formation and development of the international legal framework and the institutional framework of the Customs Union began in 2007, when the EurAsEC Interstate Council

within the framework of three states - the Republic of Belarus, Of the Republic of Kazakhstan and the Russian Federation - was endowed with the status of the Supreme Body of the Customs Union and the Commission of the Customs Union was created - a single permanent regulatory body of the Customs Union, whose main task was to ensure the conditions for its functioning and development. Natalia Borisovna Slyusar talks about the further formation of the Customs Union (CU) and the Common Economic Space (CES).

Firstly, these are the legal aspects that are associated with the formation of the legal framework of the CU, consisting of international treaties and decisions of the CU bodies, and secondly, these are aspects of the formation of the institutions of the CU and the CES. We will consider them, but first I would like to give a few general assessments of all the work that has been done within the framework of the EurAsEC on the formation of the CU and the CES.

It is necessary to take into account the historical experience of the world community and the experience of the CIS states in taking measures to form customs unions.

Throughout the world, the XX century gave the development of a new form of interstate economic integration in the form of customs unions, and, at present, there are more than 30 of them. So, in 1961. Guatemala, Honduras, Nicaragua and El Salvador joined the Central American Common Market. Costa Rica joined it two years later. In 1963. a customs union was also established between the European Union and Turkey (the EU-Turkey Association). And in 1964. an agreement was signed on the creation of a customs union between Egypt, Iraq, Jordan, Yemen, Libya, Mauritania and Syria, called the Arab Common Market. The Organization of Eastern Caribbean States, of which Antigua and Barbuda, Grenada, Dominica, Montserrat, Saint Kitts and Nevis, Saint Vincent and the Grenadines are members, was established in 1991. We are also aware of such customs unions, like the EU and Merkorsur and others. By the way, the USSR is also a customs union, since there are basic signs - a single customs territory, a single customs tariff, rules for trade with third countries, etc.

The increasing increase in the number of customs unions, the expansion and strengthening of their position in the international arena indicate that this form of interstate integration brings enormous economic, political, social and other benefits for their members. The Union makes national economies much stronger, allows its members to act as a single integrated economic and political bloc in international relations, increases the political and economic weight of states on a global scale, and also opens up great prospects for individuals in these countries, especially for economic entities.

The Customs Union within the EurAsEC (CU)

became the basis for the formation of the Common Economic Space (CES). The CES is a qualitatively deeper form of integration, which provides for the free movement of not only goods, but also services, capital, labor resources in the common customs territory of the CU. For this, along with the unification of foreign trade regulation norms, the parameters of macroeconomic policy, the tax system, the norms of antimonopoly and labor legislation, and migration policy should be harmonized.

The regulation of these integration processes required the creation of its own institutional system, i.e. bodies empowered to adopt international treaties and other normative legal acts (rules, regulations, recommendations), by their decisions.

So, on October 6, 2007, the EurAsEC Interstate Council (the Supreme Body of the Customs Union) at the level of heads of state adopted the first three international treaties aimed at forming the legal framework of the Customs Union:

− Agreement on the Commission of the Customs Union (CU).

− Agreement on the establishment of a single customs territory and the formation of the Customs Union.

− Protocol on the procedure for the entry into force of international treaties aimed at the formation of the legal framework of the Customs Union, withdrawal from them and accession to them.

Since July 1, 2011, the Customs Union has been fully operational. On January 1, 2012, a package of 17 international treaties of the Common Economic Space, signed by the heads of state on December 9, 2010, was put into effect. In accordance with the agreements, the CCC has been assigned functions not only in the field of foreign trade, but also in economic policy in general. This dictated the need to improve the institutional framework of the Customs Union and the Common Economic Space. A total of 145 "supranational" functions, on the basis of 111 international treaties that form the legal framework of the CU and the CES, have been transferred for direct regulation to the powers of the CCC. These are functions in the area:

− customs tariff and non-tariff regulation;

− application of protective anti-dumping and countervailing measures;

− ensuring technical regulation and sanitary, veterinary and phytosanitary control in the Customs Union;

− maintaining customs statistics of foreign trade and statistics of mutual trade;

− ensuring customs regulation in the CU;

− ensuring the functioning of the CES.

In this regard, the heads of state of the Customs Union on November 18, 2011 in Moscow signed:

− Treaty on the Eurasian Economic Commission

− Declaration on Eurasian Economic Integration

– Decision on the Rules of the Eurasian Economic Commission (EEC) and the formation of a new, stronger EEC apparatus.

From the date of entry into force of the Agreement on the EEC, the CCC is abolished. And the powers vested in the Commission of the Customs Union in accordance with international treaties that form the legal framework of the CU and the CES, as well as decisions of the Interstate Council of the Eurasian Economic Community (Supreme Body of the Customs Union) are transferred to the EEC. Thus, the status of the Commission does not change, but only its structure and operating procedures. In addition, it should be borne in mind that in accordance with this agreement, from the date of its signing, the Supreme Eurasian Economic Council exercises the powers vested in the Interstate Council of the Eurasian Economic Community also in accordance with the specified treaties by the international treaties of the CU and the CES.

Now we return to the newly created Eurasian Economic Commission (hereinafter - EEC). In accordance with Article 1 of the Agreement on the Eurasian Economic Commission of November 18, 2011 (hereinafter referred to as the Agreement), the Parties established the EEC as a single permanent regulatory body of the Customs Union and the Common Economic Space.

The Commission consists of the Council of the Commission and the Board of the Commission. The procedure for the activities of the Council and the Board is regulated by the Rules of Procedure of the Commission, approved by the Supreme Eurasian Economic Council at the level of heads of state.

As part of its activities, the Commission has the right to form structural divisions (hereinafter referred to as the Commission's Departments), representations of the Commission in the Parties, by decision of the Supreme Eurasian Economic Council at the level of heads of state in third countries and their associations, as well as at international organizations.

The EEC, within the limits of its powers, makes decisions that are binding on the Parties, and recommendations that are not binding. These decisions are included in the legal framework of the Customs Union and the Common Economic Space and are subject to direct application in the territories of the CU member states.

The Council consists of one representative from each Party, who is a deputy head of government, vested with the necessary powers, in accordance with the legislation of the Party concerned. Meetings of the Council are held as needed, but at least once a quarter. The time and place of the next meeting of the Council are determined at the previous meeting of the Council.

The Board of the Commission is the executive body of the Commission, which develops proposals in the field of further integration within the framework of the Customs Union and the Common Economic Space. The Board of the Commission consists of 9 members, one of whom is the Chairman of the Board of the Commission. The composition of the Board of the Commission is formed on the principle of 3 members of the Board of the Commission from each member state of the CU, who are appointed by the decision of the Supreme Eurasian Economic Council and work on a permanent basis in the Board for 4 years.

The activities of the Supreme Eurasian Economic Council, the Council of the Commission and the Board of the Commission are supported by international employees of the departments of the Commission.

The competence of the EurAsEC Court, the legal status of which is determined by the Treaty on the Establishment of the Eurasian Economic Community of October 10, 2000 and the Statute of the EurAsEC Court, approved by the Decision of the EurAsEC Interstate Council of July 5, 2010 No. 502, was expanded in connection with the formation of the Customs Union and the introduction of of this change in Art. 8 of the Treaty on the Establishment of the EurAsEC (Protocol of October 6, 2007 amending the Treaty on the Establishment of the Eurasian Economic Community of October 10, 2000).

The main task of the Court is to ensure the uniform application by the member states of the Customs Union of international treaties acting within its framework and decisions taken by its bodies. The court also considers disputes of an economic nature arising between the member states of the Customs Union on the implementation of decisions of bodies and provisions of CU treaties, gives explanations and conclusions on them.

After the unification of the customs territories of the states forming the Customs Union, the Court exercises the following powers:

- considers cases on the compliance of acts of the CU bodies with international treaties that form the legal basis of the Customs Union;

- Considers cases of challenging decisions, actions (inaction) of the CU bodies;

- gives an interpretation of international treaties that form the legal basis of the Customs Union, acts adopted by its bodies;

- resolves disputes between the Commission of the Customs Union and the states that are members of the CU, as well as between the member states of the Customs Union on the fulfillment of their obligations under the CU.

The jurisdiction of the Court may also include other disputes, the resolution of which is provided for by international treaties of the Customs Union. Such an international treaty is the Treaty on the appeal of economic entities to the Court of the Eurasian Economic Community for disputes within the framework of the Customs Union and the specifics of

legal proceedings on them dated December 9, 2010, according to which the Court is vested with the competence to consider cases on applications of economic entities:

- on challenging acts of the Customs Union Commission or their individual provisions;

- on challenging the actions (inaction) of the Customs Union Commission.

The basis for challenging the acts of the CCC or their individual provisions or actions (inaction) of the Customs Union Commission is their inconsistency with international treaties concluded within the CU, which entailed a violation of the rights and legitimate interests of economic entities in the field of entrepreneurial and other economic activities provided by these international treaties. On January 1, 2012, the EurAsEC Court began its independent activity. Funds have been allocated for the formation of the Secretariat of the Court. The Interparliamentary Assembly of the EurAsEC appointed judges of the EurAsEC Court in December 2011. In accordance with the Protocol on Amendments to the Statute of the Court of the Eurasian Economic Community of July 5, 2010, a provision is introduced,

Considering that the EurAsEC Court was formed and began its independent activity, the question arose about the continuation of the existence of a quasi-judicial body in the system of CU bodies, which is the Expert Council within the framework of the Customs Union.

This Expert Council was authorized to consider the statements of economic entities of the Member States of the Customs Union on the compliance of the decisions of the CCC, which are binding, with the legal framework of the Customs Union. However, since its formation, the CCC Secretariat has not received any applications from economic entities that would have been formalized in accordance with the Regulation on the Expert Council.

The formation of the legal framework of the Customs Union and the Common Economic Space was carried out in stages, but in a very short time.

It should be borne in mind that the decision on the formation of the legal framework of the CU and the CES was made by the heads of state during the crisis of the global financial system, which could not but affect the state of the economies of the states of the Eurasian Economic Community (EurAsEC).

In order to avoid a further economic recession of the EurAsEC member states, the heads of state of Belarus, Russia and Kazakhstan made a decision to create conditions for the restoration of a capacious domestic market, within which to create conditions for the preservation and modernization of production of the three states, as well as to increase the competitiveness of the economy on a new technological basis. ...

In this regard, on January 25, 2008, the Supreme Body of the Customs Union at the level of heads of government adopted 9 international agreements in the field of customs, customs tariff and non-tariff regulation. The heads of government also determined the principles for the collection of indirect taxes on the export and import of goods, the performance of work and the provision of services in the Customs Union.

In the period 2009 - 2010. Within the framework of the Customs Union, an Agreement on the procedure for the introduction and application of measures affecting foreign trade in goods in a single customs territory in relation to third countries and an Agreement on the rules for licensing in the field of foreign trade in goods have been adopted.

In addition, in accordance with the Agreement on the Establishment of a Single Customs Territory and the Formation of the Customs Union dated October 6, 2007, the stages and terms of the formation of a single customs territory of the Customs Union of the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation were developed and approved, which provide for three main stages of the formation of a single customs union. territory of the vehicle. In particular, the following stages have been identified:

– preliminary - before January 1, 2010

– the first - from January 1, 2010 to July 1, 2010.

– the second - from July 1, 2010 to July 1, 2011.

At the same time, the heads of state determined the final date for the creation of a single customs territory of the Customs Union - July 1, 2010. At the preliminary stage, two main tasks were solved: completing the formation of the legal framework of the Customs Union and organizing the phased transfer of agreed types of state control, with the exception of border control, to the external outline of a single customs territory. On November 27, 2009, the heads of the member states of the Customs Union signed the Agreement on the Customs Code of the Customs Union. Thus, the codification of the customs legislation of the CU was carried out, indicating a qualitatively new level of interstate economic integration.

In the field of customs-tariff and non-tariff regulation, the EurAsEC Interstate Council approved the unified Commodity Nomenclature of Foreign Economic Activity of the Customs Union (TN VED CU) and the Unified Customs Tariff of the Customs Union (ETT CU). The heads of state also decided to transfer to the CCC a number of important functions in the field of customs-tariff and non-tariff regulation, provided for by the relevant international treaties of the Customs Union, in particular, the maintenance of the CCC of the CU.

In the field of consumer protection, the Supreme Body of the Customs Union made a decision to endow the EurAsEC Court with the functions of resolving disputes within the CU.

At the same time, the Expert Council became a mechanism for direct appeal against the Commission's

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actions, which was empowered to consider applications of legal entities and individuals of the Customs Union member states engaged in economic activities on the compliance of decisions of the CCC with its legal framework.

As part of the preliminary stage, international agreements on technical regulation, sanitary, veterinary and phytosanitary measures were also adopted. In order to create the Common Economic Space, on December 19, 2009, the Supreme Body of the Customs Union approved the Action Plan for the formation of the Common Economic Space of the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation for 2010-2011. The plan provided for the development of two packages of agreements on economic policy issues, freedom of capital movement, monetary policy, transport, energy, communications, freedom of movement of labor and technical regulation. These international treaties were adopted and entered into force on January 1, 2012.

In the development of the provisions of the adopted international treaties of the Customs Union of the CCC, a number of important normative legal acts in various areas of regulation were approved, among them, in particular, among them:

1) in the field of customs regulation:

− customs declaration forms and instructions for filling them out;

− the procedure for conducting a customs examination during customs control;

− forms of general registers of persons carrying out activities in the field of customs;

− instructions on the procedure for using transport (shipping), commercial and (or) other documents as a declaration for goods; and etc.;

2) in the field of customs and tariff regulation:

− regulations on the procedure for technical maintenance of the unified TNVED CU and the Regulation on interaction on issues of maintaining the unified TNVED CU;

− regulations on the procedure for making decisions and clarifications by the CCC on the classification of certain types of goods, etc .;

3) on the application of sanitary measures, the implementation of veterinary control and the application of veterinary and sanitary measures, as well as technical regulation adopted a number of lists of goods to which these measures apply, and provisions on the procedure for their implementation.

The second stage of the creation of a single customs territory of the Customs Union was also associated with the entry into force of the Treaty on the Customs Code of the CU. The Customs Code entered into force, and a single customs territory of the Customs Union was formed for the Republic of Kazakhstan and the Russian Federation on July 1, 2010, and for the three member states of the Customs Union - on July 6, 2010.

As well as the formation and maintenance of the Unified Register of Certification Bodies and Test Laboratories (Centers) of the Customs Union. As part of the development and application of information technologies in the Customs Union, two fundamental agreements have been adopted: the Agreement on the Creation, Operation and Development of the Integrated Information System of Foreign and Mutual Trade of the Customs Union and the Agreement on the Application of Information Technologies in the Exchange of Electronic Documents in Foreign and Mutual Trade in the Common Customs Territory CU, and also approved the Concept for the creation of an Integrated Information System for Foreign and Mutual Trade of the Customs Union.

In addition, on July 1, 2010, the Agreement of the Customs Union on Sanitary Measures, as well as the Agreement of the Customs Union on Veterinary and Sanitary Measures and the Agreement of the Customs Union on Plant Quarantine of December 11, 2009, entered into force, in connection with which the Customs Union Commission the corresponding powers were transferred.

In order to develop interstate cooperation in criminal cases and cases of administrative offenses, on July 5, 2010, the heads of state signed an Agreement on the Specifics of Criminal and Administrative Liability for Violations of the Customs Legislation of the CU and the Member States of the Customs Union and an Agreement on Legal Assistance and Interaction of Customs Authorities of States - members of the Customs Union for criminal cases and cases of administrative offenses. In accordance with these international treaties, the specifics of bringing persons who have committed offenses on the territory of the Customs Union to criminal and administrative responsibility have been determined. Also, bodies authorized to carry out proceedings in criminal cases and cases of administrative offenses have been established, the principle of mutual recognition and execution in the member states of the Customs Union of the relevant procedural documents was proclaimed, the procedure for interaction of national authorized bodies for solving crimes, bringing perpetrators to criminal, administrative responsibility for violations of the customs legislation of the Customs Union and the legislation of the member states of the Customs Union, control over the observance of which is entrusted to the customs authorities. To date, the Action Plan for the formation of the Customs Union has been largely completed. The successful work of specialists in the formation of the legal framework of the CU and the CES was noted by the heads of state. the procedure for interaction of national authorized bodies for solving crimes, bringing the perpetrators to criminal and administrative responsibility for violations of the customs legislation of the Customs Union and the legislation of the member states of the Customs Union, control over the observance of which

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The next stage of the joint work of the experts of the parties is to codify the adopted international treaties and decisions of the CU bodies in order to eliminate conflicts and gaps, as well as to prepare a single international treaty, on the basis of which the Eurasian Economic Union was established in 2015. The codification work includes, inter alia, agreements on:

balanced macroeconomic, fiscal and competition policies;

structural reforms of labor, capital, goods and services markets;

creation of Eurasian networks in the field of energy, transport and telecommunicationsIn accordance with the tasks of the first stage of the formation of a single customs territory of the CU member states, from January 1, 2010, the Customs Union Commission is working to exercise its powers in the field of tariff and non-tariff regulation of foreign trade of the Customs Union. Thus, on January 1, 2010, a number of international treaties and normative legal acts in the field of customs and tariff regulation came into force, including the TN VED CU and ETT CU. Since that date, three agreements of the Customs Union on non-tariff regulation have also come into force. 57 of the Customs Code of the CU, a Unified Database of Preliminary Decisions of the Customs Union on the Classification of Goods and Technical Conditions for the Transfer of Data on Preliminary Decisions on the Classification of Goods have been developed.

The Commission of the Customs Union, within the framework of the delegated powers, approved the List of goods for which quotas and volumes of tariff quotas are established for the import of goods into the territory of the member states of the Customs Union, as well as the List of goods that are essential for the internal market of the CU, in respect of which, in exceptional cases temporary export restrictions or bans may be imposed.

In connection with the entry into force of the Treaty on the Customs Code of the CU, the norms of which are largely of a reference nature, it became necessary to enact, simultaneously with the Code, legal mechanisms developed to implement its provisions.

Thus, on May 20, 2010, an Agreement was signed on the establishment and application in the Customs Union of the procedure for enrollment and distribution of import customs duties (other duties, taxes and fees that have an equivalent effect). The agreement establishes a single unified mechanism for the enrollment and distribution of honey by the Member States of the Customs Union of import customs duties, other duties, taxes and fees that have an equivalent effect.

The meeting participants reviewed the current state and development prospects of the light industry in Russia. The meeting of the Coordinating Council took place on December 10, 2012 at the site of the "Donetsk Manufactory" - one of the leading enterprises of the light industry in Russia

Welcoming the participants in the meeting of the Coordination Council, Denis Manturov, in particular, said: "Dear friends, dear colleagues. Today we are holding this year's final meeting of the Coordination Council. We took a good pace, laid down the correct practice to gather in such a composition on various topics. This morning, in addition to the issues that we planned to discuss with you in terms of the development of our light industry, Vasily Yuryevich (Governor of the Rostov Region) and I had the opportunity to start the construction of a new polypropylene film production plant in the city of Shakhty. In 2014, it is planned to release the first propylene film, it will be supplied to the food industry, as well as to technical industries. As part of the construction of this enterprise and its subsequent launch, an agreement was signed with the Sibur company on the supply of pellets for production.

If you don't mind, we will move on to the main agenda for today's meeting. This is the theme of the development of light industry in Russia. But before we continue the discussion, I would like to say a few words about the state and what prospects this industry has in Russia. I will give a few numbers for a general understanding. The total volume of the market for products of the light and textile industry ranks second after the food market. This is more than two and a half trillion rubles on an annualized basis. This is a huge volume, and if you compare it with other industries, it is four times the market for consumer electronics and

pharmaceuticals, and twice the market for the automotive industry, not to mention other industries. This industry is characterized by a high rate of capital turnover, which also favorably affects its investment attractiveness. In addition, light industry is an integral part of the development of the regional economy, making a significant contribution to the creation of jobs, primarily in the field of small and medium-sized businesses. The enterprises of the industry are located in 72 regions of our country. There are several thousand enterprises and associations in this industry. Moreover, about 70 percent of these enterprises are city-forming. In total, about 400 thousand people work at these enterprises, respectively, 75 percent of them are women. Thus, the development of light industry is the most important task, both from an economic and a social point of view. Starting from January 1, 2013, the average salary for the company has been increased by 8 percent. That is why the Ministry of Trade and Industry of Russia has developed a subprogram for the development of light and textile industries as an integral part of the State Program "Development of Industry and Increasing its Competitiveness", which I reported at a Government meeting on Friday and was approved. It is a large-scale document with 17 subprograms. And an important role is assigned to the subprogram for the development of light and textile industries.

Together, by common efforts, this program was made, in particular, for the light and textile industries, a whole set of measures was formed to support the development of the industry. This primarily concerns subsidies. The amount of subsidies for repayment of interest rates on loans for the purchase of raw materials in this industry has almost doubled. Next year we will increase this volume to 640 million rubles. Also, the amount of subsidies for repayment of interest rates on loans for technical re-equipment was increased, the volume was increased to 225 million rubles and for the first time 275 million rubles were allocated for activities to promote products on the market. Such work will be carried out, inter alia, within the framework of thematic collective stands at exhibitions, fairs, which are supported by our department. The government continues to support research and development, aimed at improving the raw material base and the production of innovative finished products through the development and implementation of new technologies, and the competent systematic use of these measures by business circles with the support of regional authorities will allow Russian manufacturers to quite successfully compete with imported counterparts in the context of Russia's accession to the WTO. Moreover, we have quite serious competition from our now WTO partners, these are China, Turkey and a number of other countries that have successfully proven themselves in this market. Therefore, it is very important. If we skillfully, like our other colleagues

from other countries, use the tools on time and effectively, including those aimed at reducing discriminatory measures by our colleagues in relation to our products, we will be able to skillfully and effectively, taking into account the entry into the WTO.

First of all, it is dependence on imported raw materials. Today, 100% of raw materials are purchased in Uzbekistan. We have nothing against our colleagues in the CIS, but we believe that we have every opportunity to develop our own resource base. Let us give an example, in 2013 we got the first test crop of cotton, and high-quality cotton, which is only in the United States, in small quantities in the Astrakhan region, we are thinking about what opportunities there are to get away from imported raw materials. Moreover, this is not only for plant raw materials, it also applies to the chemical industry - synthetic thread.

The second challenge, unfortunately, is the low technological level of the industry. First of all, this is due to a low level of investment in this industry, a lack of own financial resources and a complicated mechanism for obtaining loans for the implementation of large investment projects.

Of course, the development of the industry, including its technological modernization, is the task of private business. The state has no right to subsidize an ineffective investor. But for those who have taken this path of modernization, we will develop the existing tools, offer new mechanisms for attracting investors. In particular, we are currently working on the issue of increasing the size of subsidies on loans for technical re-equipment to 90% of the refinancing rate and expanding the areas of subsidies for the construction of new enterprises. Moreover, we have been thinking for a long time with our colleagues from the Ministry of Finance on the topic, including preparing for these decisions, how more universal toolkits could be made so that enterprises in different industries can receive our support, in order to

The third major problem is counterfeiting. We are seriously paying great attention to this issue, and there is much to be done in this area. This year, under the auspices of the Prime Minister, we held the Anti-Counterfeiting Forum in October. This forum will be held annually, next year it will be held in Kazakhstan within the framework of the customs union. Today, the share of products of Russian enterprises in the domestic market does not exceed 25%. At the same time, the share of legal imports is about 40%. Accordingly, more than 35% of illegally imported and illegally produced products on the territory of the Russian Federation. This is a lot. The expulsion of illegal products from the market is the main reserve for the development of the industry. When there is such a situation on the market, we simply cannot adequately talk about the competitiveness of a Russian

manufacturer, since the conditions of competition are too distorted by illegal products.

Well, a separate topic is the work of the industry within the framework of the Common Economic Space. The formation of the Eurasian Economic Commission gives us the opportunity to take advantage of the natural advantages of each of the countries participating in this integration process. My colleagues from the EEC discussed the possibility of developing a joint program for the development of light industry in Russia, Belarus and Kazakhstan.

When we hear about the protection of Russian manufacturers of whatever: machine tools and cars, clothing and footwear, food and furniture, etc., we always think about the shadow side of the coin from such innovations: about the quality of goods. The company loses the incentive to improve it and update the assortment, because in the absence of imports, people will take anything. But representatives of the light industry have something else in mind: the decriminalization of the supply of clothing and footwear to the domestic market.

In total, according to expert estimates, the population of Russia buys about 600 million pairs of shoes. The domestic industry in 2019 produced more than 52 million pairs (in 2020 - 51 million pairs), 100 million pairs are supplied by official import. Where do the other four hundred-odd million come from? They are imported in all kinds of illegal ways.

The condition of the fixed assets of the footwear industry does not allow the production of high-quality, in-demand products. The enterprises use mainly physically and morally obsolete equipment that is not capable of ensuring the use of modern technologies. Depreciation of machinery and equipment - 76.8%, the share of completely worn out machinery and equipment - 61.2%.

The average level of capacity utilization in the footwear industry remains the lowest in the light industry - less than 30%. More than half of enterprises and organizations in the industry are unprofitable. The investment climate in the industry continues to be unfavorable.

A significant decrease in the production of children's shoes at most Russian shoe enterprises, including in the regions of the Southern Federal District and the North Caucasus Federal District, is associated with the abolition of subsidies from the federal budget, with imperfect taxation in the production of children's assortment, and an insufficient variety of styles toboats for its production, especially for high school students.

On the consumer market of the regions of the Southern Federal District and the North Caucasus Federal District, goods for children of domestic manufacturers were ousted by foreign manufacturers who supply cheap footwear from low-quality materials and with gross violations of compliance with the requirements of GOST. In addition, these shoes,

for the most part, do not have certificates of conformity and hygiene certificates, which provokes discomfort when wearing them and various diseases of the feet.

But these shoes continue to be bought, since consumer demand acts as the main factor influencing the formation of the assortment, which is provoked by the deficit and the dissatisfaction of the population in the children's shoes offered for purchase by type. When choosing shoes, the consumer relies on a certain set of requirements that he makes for the product.

When choosing shoes, buyers are guided by the quality, convenience and relatively low price of products. Buyers' priorities also depend on their age group.

To revive the production of children's shoes in the regions of the Southern Federal District and the North Caucasus Federal District, first of all, it is necessary to create a number of shoe industry enterprises in those constituent entities of the district where socio-demographic factors and low employment of the population are pronounced: these are the republics of Chechnya, Dagestan, Ingushetia, Kalmykia.

But newly created enterprises need state support, because they do not have enough own funds, and borrowed funds are not available due to high rates. It is necessary to solve the general tasks at the enterprises of technological renewal of the industry, replenish working capital, increase the efficiency of scientific and technical support of production for the manufacture of high-quality and affordable children's shoes.

What prevents the shoe enterprises of the Southern Federal District and the North Caucasus Federal District from successfully functioning and producing that and so many shoes to succeed in filling their niche with competitive children's shoes?

The first of the problems- deterioration of equipment. Under the given operating conditions, when many shoe enterprises receive incomes only enough to cover business-related expenses, there can be no talk of re-equipment of the enterprises' capacities. To solve this problem - and as a subtitle it is the lack of investment for upgrading equipment - there are a number of possibilities, such as obtaining a bank loan, for readjustment and gradual phased replacement of existing equipment, and other methods.

However, the question arises, where is it most profitable, with minimal costs, it is possible to purchase equipment? The following figures can serve as an answer: 89.7% of all capacities involved in the footwear industry are produced abroad. Equipment for the production of footwear is practically not produced in Russia. Therefore, the following algorithm for solving this problem is proposed:

- to carry out an inventory and an assessment of the technical level of production facilities, which are

still preserved. This is necessary in order to prioritize and predict production renewal.

- to abolish for three years import customs duties and VAT on imported technological equipment for the textile and light industry, which is not produced in Russia.

- to introduce differentiated taxation of fixed assets, depending on the terms of their operation, thereby stimulating the renewal of their active part.

- exemption from taxation of that part of the profit that is directed to the modernization of production. that is, to seek the restoration of the previously valid benefit, which has been actively working not so long ago and allowed most enterprises to solve their local problems.

- Creation of a sectoral leasing company in the country, possibly with the participation of state capital, similar to Agropromleasing.

- given that the worn-out fixed assets of enterprises practically do not have a collateral value, to strive for federal executive bodies and constituent entities of the Russian Federation to act as guarantors of the implementation of the most significant technical projects.

Next problem- creation of conditions for fair competition for shoe enterprises, excluding the huge scale of illegal import of cheap low-quality products from abroad. For this, it is necessary to increase the size of customs duties on imported footwear.

To protect the domestic market from unfair competition, it is advisable to develop a Consumer Market Law. It should, in particular, be provided for.

− a prohibition for trading organizations, including markets, to accept goods for sale from individuals who are not registered as an entrepreneur without forming a legal entity;

− misleading attribution to unfair competition: designation of an enterprise, false designation of the geography of goods origin, product counterfeiting, false accusations or unfair marketing, complication of market access, etc.

To change the situation on the domestic footwear market of the regions of the Southern Federal District and the North Caucasus Federal District, as well as, in connection with the need to satisfy the existing deficit for children's shoes, we proposed the following methods: to put into operation new production facilities to satisfy the existing deficit and place them in the regions of the Southern Federal District and The North Caucasus Federal District, while we believe that we can use the existing empty buildings in order to reduce the cost of shoe production; in case of a shortage of working capital, recommend financial leasing, loans or factoring to enterprises; to produce shoes for children with different levels of family income, from materials of different cost, so that by varying the level of profit, including through the production of expensive shoes for an adult buyer, it would be possible to compensate for the costs of producing shoes from cheap materials for children. At the same time, it is desirable for each enterprise to sell such a volume of footwear in its price segment that will ensure not only a steady demand for it, but also the constant development of the enterprise. This style of work is used by the developed enterprise for the production of children's shoes LLC "Yegoryevsk-obuv": to develop an assortment of footwear for children, taking into account the climatic conditions and national characteristics of each subject of the region; to make shoes of various methods of fastening the blank of the top to the bottom (thread and combined fastening methods); use nano - and innovative technologies in the production of children's shoes. This style of work is used by the developed enterprise for the production of children's shoes LLC "Yegoryevsk-obuv": to develop an assortment of footwear for children, taking into account the climatic conditions and national characteristics of each subject of the region; to make shoes of various methods of fastening the blank of the top to the bottom (thread and combined fastening methods); use nano - and innovative technologies in the production of children's shoes. This style of work is used by the developed enterprise for the production of children's shoes LLC "Yegoryevsk-obuv": to develop an assortment of footwear for children, taking into account the climatic conditions and national characteristics of each subject of the region; to make shoes of various methods of fastening the blank of the top to the bottom (thread and combined fastening methods); use nano - and innovative technologies in the production of children's shoes.

Currently, other domestic footwear enterprises operating in a competitive environment with variable external influences attach more and more importance to marketing research of their products. If the value of the results of the marketing system at a shoe enterprise is underestimated, its production capacity, intellectual and human potential become unclaimed. The dynamics of the impact of market demand on the produced assortment of footwear should be monitored by the marketing service at all stages of its life cycle and taken into account in systems responsible for the quality and quantity of manufactured products, their price, the introduction of innovations, and the development of new types of products.

This is due to the fact that the market situation changes at each stage of the life cycle and requires a corresponding change in the strategy and tactics of the behavior of the shoe company on the market, which is of particular importance.

Basic types of shoes go through 4-5 stages before disappearing from the market: introduction (introduction to the market), growth (development), maturity (stabilization), decline (decline and renewal of products), dying (dying and the beginning of the cycle of renewal of the range of shoes) ...

The first stage is the presentation stage (the period when new types of footwear are introduced to the market). At this stage, the demand for footwear is growing slowly. This is due to the fact that the period when a new type of footwear is introduced to the market is not yet known to most prospective buyers.

At this stage, the company makes a small profit. Often, an entrepreneur calculates losses, sometimes even very large ones. Sellers are usually very careful about adding shoes that are in the presentation stage to their inventory. They realize that most of the regular customers are not familiar with this type of footwear, so there is always a difficulty in selling these types of footwear. At this stage, prices are set at minimum, the enterprise has little or no profit.

The second stage is the growth stage. If this type of shoe survives in the first stage, it continues to develop. At this stage, sales are growing rapidly. Modified versions of the base shoe must be offered to meet the growing market. Relative margins are high.

The third stage is the maturity stage. At this stage, shoes have their own market and are in demand. At the stage of maturity, competition increases and reaches its maximum, as shoe types from other manufacturers enter the market. As a result, both overall and per unit profit margins are reduced because discounts are widely used.

The fourth stage is the recession stage. At this stage, the shoes that do not undergo any changes become boring to consumers or the need that they were designed to satisfy disappears. An unpredictable reason for the decline in sales during the recession can be the technical obsolescence of this type of footwear. During the downturn, sales across the industry decline and many businesses leave the market as the number of consumers decreases, and the product range of footwear concentrates on the best-selling models in the free market.

The fifth stage - the stages of decline and dying, that is, the decline and renewal of the range of shoes, as well as the dying and the beginning of the cycle of renewal with new types of shoes, are characterized by a slow and then a sharp drop in demand. In the face of declining sales and profit margins, manufacturers sometimes struggle to restore demand for a particular shoe. These include the following steps: a new type of packaging, special advertising and price changes.

Although it is quite difficult to abandon the range of shoes produced, sooner or later, as sales continue to decline, entrepreneurs are forced to make such a decision.

For shoes that are clearly in decline, sales reps begin to cut back on supplies, try to minimize repeat orders, and then phase out the supply of these types of shoes. They can even lower the prices of leftovers in order to ditch the given type of footwear entirely.

Thus, each stage of the shoe's life cycle is a variable that determines the marketing activities in the target market.

The life cycle of a shoe depends on the number of similar types of footwear, their competitiveness, as well as on the correct management decisions aimed at developing auxiliary measures to optimize the structure of the life cycle of this type of footwear (Table 1).

The correct use of different marketing elements at different stages of the shoe life cycle is presented in the table.

It is very important to maintain an optimized life cycle, to determine the initial price for the type of footwear produced and the maximum possible price reduction, provided that production is still breakeven. To optimize this factor, the company should develop discount systems that allow attracting various consumer segments to the purchase of the company's products and thereby reduce the stocks of manufactured but not yet sold products at the moment when it becomes clear that this type of footwear is losing its previously occupied market. niche.

T a b l e 1 - The main elements of marketing at different stages life cycle of a type of shoe

Elemen you are marketing	Life cycle stages of a type of shoe				
	representation	height	maturity	decline	dying
Objectives	Bring the product to the market	Conquer a strong position	Maintain market position	Introduce all stocks into circulation	Move to a new lossless lifecycle
Price	High	High then slowly starts decline	Stabilizes, then decreases	Keeps on falling	Minimal (up to scanty)
Sales channels	Agents supplying test consignments of goods	Use - channels are established to increase sales, wholesalers are included	Zadeyzova - we are all possible channels	The number of distribution channels is decreasing	Only those channels that provide - minimum new delivery

Advertising	On the consumer properties of the new product, its advantages, its prestige is emphasized ness	Advertising is intensified, it focuses on a variety of shopping motives	Supportive, persuasive	Supportive, reminiscent	Reminding

In addition, a shoe company can initiate price reductions in case of underutilization of production capacities, a reduction in market share under the onslaught of an aggressive competitive environment, etc.

If an enterprise uses a proactive periodic price reduction as a tool for influencing consumers, taking care of its costs, developing measures to reduce them by improving equipment and technology, introducing new types of materials into production, constantly improving the quality of footwear, then one should be wary of a premature or sharp decrease product prices. Because the retail consumer of footwear may develop a stereotype about the "poor quality" of the goods offered to him. And as a result, the company will receive not an increase in profits due to an increase in sales due to a decrease in prices, but a sharp drop in demand for this type of footwear and, as a result, a decrease in sales and a negative financial result for this type of footwear [23].

Different enterprises have different approaches to determining the strategy for the production of a range of footwear, depending on the needs of the market, available resources, and characteristics of demand. Moreover, the same shoe company can use different strategies in relation to different types of shoes. The choice of strategy is usually based on its competitiveness. Various approaches or methods of analyzing the portfolio of orders are used, which allow evaluating the nomenclature of the manufactured assortment of shoes in terms of the profitability of its individual elements.

One such approach has been proposed by the Boston Advisory Group. This method allows for the classification of various combinations of footwear with a differentiated production program based on the so-called growth matrix, or "portfolio of business lines".

The application of this approach requires taking into account the existing and potential market segmentation, various time aspects of the profitability of a particular combination of shoe types, as well as the influence of competition. For example, an enterprise may be the largest in its industry, but at the same time not occupy a leading position in any of the market segments.

For combinations of shoe types that are characterized by low sales growth, it is noteworthy that their market share is usually high and can be offered to the consumer, since they are able to generate more revenue than is required for investment in production. These shoe combinations are especially popular with sales agents because of their high demand, and are attractive to the sales and marketing manager because they can generate the real money needed to develop and support the marketing of new or updated footwear.

The really tough challenges are posed to management, marketing and sales managers for footwear that has a small market share, often needs support, and lags far behind the leaders in terms of market position and consumer confidence. Those who deal with it inevitably have the following questions: will it become in demand, how much time and money will it take for it to be in demand, what is its perspective on the market? These combinations of shoe types are generally not favored by salespeople. Small market share and weak demand, often low confidence and ignorance of buyers, weak advantages over competing types of footwear make it difficult to sell them. However, if there is a demand for them, sales agents should devote all their efforts to organizing their sales. In doing so, the sales and marketing manager may be faced with the need to introduce a special incentive commission rate and provide personal leadership to support the sales force's efforts to market these shoe combinations.

Consequently, only in a close alliance of manufacturers and distributors engaged in the sale of the assortment of footwear manufactured by these enterprises, it is possible to form highly efficient shoe enterprises in the Southern Federal District and the North Caucasus Federal District, capable of operating in a free market.

The formation of consumer demand is of current importance in the conditions of market relations, since knowledge of the processes of development, management and satisfaction of the population's demand for specific consumer goods makes it possible to make informed management decisions when drawing up a production program, planning retail trade and its supply of goods. In addition, the study of the regularities of the formation of the effective demand of the population for certain groups of goods makes it possible to purposefully influence the volume and structure of their production and consumption in order to identify the quantity of goods and their qualitative structure, which, in turn, will most fully

satisfy the needs of the population with the available resources.

The footwear market is a constituent element of economic relations, in which, on the one hand, footwear manufacturers are participants, and on the other, consumers. Footwear is one of the most important goods produced by the light industry of the Russian Federation and imported from abroad. The degree of satisfaction of consumer demand, profitability and profitability of manufacturers depend on the competitiveness of the assortment. The result of the interaction of the constituent parts of the market (demand, supply, price for shoes) is the ability to maximize the satisfaction of demand for products at a specific price.

The Southern Federal District and the North Caucasus Federal District are the most compact districts in Russia. Their total area is 589.2 thousand km2 (3.5% of the territory of Russia), the population is 22.8 million people. (14.9% of the population of Russia).

Demand parameters include:

−   comparative competitive advantages... The product must have pronounced features or pronounced advantages in comparison with analogues existing on the market, products or services of competitors;

−   social orientation... At the same time, it is necessary that the product fits into the existing social conditions, so that the proposed product corresponds to the prevailing lifestyle and system of values of the consumer;

−   ability to satisfy the consumer... That is, the product must perform all functions to meet the key needs and requests of the buyer.

Demand is driven by consumer preferences, where it is not objective characteristics that are decisive, but the subjective perception of the properties of the shoe - the purchase value, consisting of a number of components. Therefore, it is important to establish by what evaluation criteria the buyer purchases footwear with the desired combination of properties.

When choosing shoes, the consumer relies on a certain set of requirements that he makes for the product. This set of consumer requirements is presented in Table 2, which was formed based on the data of a sociological survey of 1000 residents living in the city of Rostov - on - Don, conducted by employees of the Institute for Advanced Studies in the city of Rostov - on - Don.

The calculation method is that the number of respondents who assigned the parameter the first place is multiplied by 9 points, as by a maximum of a nine-point system. Then the number of respondents who assigned the parameter the second place is multiplied by 8 points. After the survey of all the respondents according to the parameter under study, the sum of the points is determined. Further, this amount is divided by 100 for convenience of presentation. The parameter with the highest score is the highest priority, with the lowest score is the least priority. This technique has established itself as the most effective and has long been used by marketing services, so it was preferred.

Table 2- Buyers' priorities when choosing shoes

| Parameter | Number of responses from buyers with a preference for a place from 1 to 9 | | | | | | | | | Indicator scores | Priority |
	I	2	3	4	5	6	7	8	9		
Quality	424	283	175	118						80.1	1
Convenience	302	221	235	145	47	50				74.36	2
Affordable price	274	216	186	161	91	72				72.05	3
Natural leather		182	170	198	155	123	172			56.2	4
Durability		98	163	204	193	184	88	70		52.5	5
Fashion			71	102	272	243	184	128		42.5	6
Design				72	145	179	201	246	157	31.3	7
Natural fur					97	149	228	282	244	25.7	8
Color							127	274	599	15.28	9
Total:	1000	1000	1000	1000	1000	1000	1000	1000	1000		

Thus, according to Table 2, when choosing shoes, buyers are guided by the quality (80.13 points), convenience (74.36 points) and price (72.05 points) of the product. Customers give the least preference to shoe color (15.28 points). Buyers' priorities also depend on their age group. For all groups of buyers, the priority is the quality and comfort of the shoes. Also, the institute's marketers revealed that among other factors for buyers under 40 when choosing shoes is fashion and design, while for buyers over 40 years old - this is the price. The quality of imported footwear is satisfied only by 35% of surveyed buyers, 32% - note its low quality level, 54% of buyers are satisfied with the quality of Russian footwear, 26% - the quality is not satisfied, 35% - consider domestic footwear quite comfortable, 39% are uncomfortable. On average, shoppers purchase two pairs of shoes a year.

The data obtained reflects the gaps between buyers' requests and the achieved level of domestic footwear production. That is, more than half of the respondents are satisfied with the quality of domestic footwear, but 39% of the respondents consider domestic footwear uncomfortable.

If we focus on the fact that 47% of the region's population are rural residents with a low level of income, then, accordingly, footwear produced in the region should first of all meet two main requirements - convenience and low price. Then the released footwear will be successfully sold in the region. Of course, other characteristics are also important, especially if the target market is not only the regions of the Southern Federal District and the North Caucasus Federal District, but the regions of Russia.

Shoe manufacturers want to know what to expect from the future state of the market. This knowledge for them is a matter of "life and death". Anyone who knows how demand, product supply and prices will change in a month, in a year, in five years, can make the most effective commercial decision. Therefore, one of the most important functions of marketing is market forecasting.

Market forecast is a scientific prediction of the prospects for the development of demand, product supply and prices, carried out within the framework of a certain methodology, on the basis of reliable information, with an assessment of its possible error.

To analyze the demand for footwear, we will calculate the aggregate demand in the regions of the Southern Federal District and the North Caucasus Federal District and make a forecast assessment of its behavior.

A shoe manufacturer in the Southern Federal District and the North Caucasus Federal District is presented in Table 3.

T a b l e 3 - Manufacturers of footwear in the Southern Federal District and the North Caucasus Federal District

Manufacturer's name	Release in 2020, thousand pairs	Specific weight,%
State Enterprise KBR "Narbek"	43.3	0.36
FL LLC "Bris-Bosphorus"	11047.8	91.52
ZOA "Donobuv"	233.7	1.93
LLC "Mercury TV"	89.3	0.74
LLC "Mira"	175.7	1.08
FL CJSC "Donobuv Taganrog"	406.6	3.38
FL CJSC "Donobuv Salsk"	74.6	0.62
Total:	12071	100

Thus, the market capacity is equal to E = 12071 thousand pairs (Table 3), which corresponds to 19917 million rubles.

Naturally, knowing the capacity of the market, one can determine the coefficient characterizing the satisfaction of demand using the formula

$$k = \frac{E}{C} = \frac{19917}{137129,37} = 0,145 , \qquad (1)$$

The value k = 0.145 indicates that there are huge reserves for the enterprises of the regions of the Southern Federal District and the North Caucasus Federal District to increase the volume of sales, and with a greater degree of certainty it can be argued that the demand for products due to domestic shoe enterprises located on the territory of the two analyzed districts is not satisfied.

The obtained forecast of market development showed a possible increase in market capacity in the range of 82,048.67 million rubles. up to 152376.07 million rubles.

Conclusion

According to the calculations, there is a deficit for footwear in the regions of the two districts. Further, the quantitative value of the shortage of footwear is calculated for each segment of the regions in two districts.

The need for shoes is calculated from the recommended wardrobe indicators for children under 4 pairs, women 5-7 pairs, men 3-4 pairs. On the basis of data on the required consumption and real output of footwear, the size of the deficit is compiled for each assortment group and for each constituent entity of the Southern Federal District and the North Caucasus Federal District.

The greatest shortage of footwear is noted in the North Caucasus Federal District, in some regions it is 100%. The situation is a little better in the Southern Federal District, where the deficit of footwear is 59.2%. In total, in the Southern Federal District and the North Caucasus Federal District, the deficit in footwear in 2009 was equal to 46105 thousand pairs, i.e. 74%.

Thus, the presence of such a deficit, as it were, creates the basis for organizing shoe enterprises in regions where today a tense social situation remains due to the lack of jobs, and only the goodwill of the municipal, regional and federal branches could implement our proposals and significantly facilitate the life of multinational peoples these regions.

References:

1. (2008). *Quality management of competitive and demanded materials and products:* Monograph / Yu.D. Mishin [and others]; under the general editorship of Doctor of Technical Sciences, prof. V.T. Prokhorov. (p.654). Mines: Publishing house of GOU VPO "YURGUES".

2. (2012). *Production management of competitive and demanded products*: V.T. Prokhorov [and others]; under the general... ed. Doctor of Technical Sciences, prof. V.T. Prokhorov; FSBEI HPE "YURGUES". (p.280). Novocherkassk: YRSTU (NPI).

3. (2012). *Restructuring of enterprises - as one of the most effective forms of increasing the competitiveness of enterprises in markets with unstable demand*: monograph / N.M. Balandyuk [and others]; under total. ed. Doctor of Technical Sciences, prof. V.T. Prokhorov. FSBEI VPO Yuzhno-Ros. state University of Economics and Service". (p.347). Mines: FGBOU VPO "YURGUES".

4. (2014). *Quality revolution: through advertising quality or through real quality*: monograph by V.T. Prokhorov [and others]; under the general... ed. Doctor of Technical Sciences, prof. V.T. Prokhorov; ISOiP (branch) DSTU. (p.384). Novocherkassk: YRSPU (NPI).

5. (2015). *Advertising as a tool promotion of the philosophy of the quality of production of competitive products*. Kompanchenko EV, [and others]; under total. ed. Doctor of Technical Sciences, prof. V.T. Prokhorov; Institute of the Service Sector and Entrepreneurship (branch) of the Don State Technical University in Shakhty: ISO and P (branch) of the DSTU, (p. 623).

6. (2015). *Assortment and assortment policy*: monograph / V.T. Prokhorov, T.M. Osina, E.V.Kompanchenko [and others]; under total. ed. Dr. tech. Sciences, prof. V.T. Prokhorov; Institute of the service sector and entrepreneurship (fil.) Feder. state budget. educated. institutions of higher. prof. education "Don state. tech. un-t "in the city of Shakhty Rost. region (ISOiP (branch) DSTU). (p.503). Novocherkassk: YRSPU (NPI).

7. (2017). *Concept import substitution of light industry products: preconditions, tasks, innovations*: monograph / VT Prokhorov [and others]; under total. ed. Doctor of Engineering Sciences, prof. V.T. Prokhorov; Institute of the Service Sector and Entrepreneurship (branch) of the Don State Technical University. (p.334). Novocherkassk: Lik.

8. (2018). *The competitiveness of the enterprise and the competitiveness of products are the key to successful import substitution of goods demanded by consumers in the regions of the Southern Federal District and the North Caucasus Federal District:* collective monograph / VT Prokhorov [and others]; under total. ed. Dr. tech. Sciences, prof. V.T. Prokhorov; Institute of the Service Sector and Entrepreneurship (branch) of the Don State Technical University. (p.337). Novocherkassk: Lik.

9. (2018). *Management of the real quality of products and not advertising through the motivation of the behavior of the leader of the collective of a light industry enterprise*: monograph / O.A. Surovtseva [and others]; under the general... ed. Dr. tech. Sciences, prof. V.T. Prokhorov; Institute of the Service Sector and Entrepreneurship (branch) of the Don State Technical University. (p.384). Novocherkassk: YRSPU (NPI).

10. (2019). *Quality management system is the basis of technical regulation for production import-substituting products*: monograph / A.V. Golovko [etc.]; under total. ed. Dr. tech. Sciences, prof. V.T. Prokhorov; Institute of the Service Sector and Entrepreneurship (branch) of the Don State Technical University. (p.326). Novocherkassk: YRSPU (NPI).

11. (2019). *On the possibilities of regulatory documentation developed within the framework of the quality management system (QMS) for digital production of defect-free import-substituting products*: monograph / A.V. Golovko [and others]; under total. ed. Dr. tech. Sciences, prof. V.T. Prokhorov; Institute of the Service Sector and Entrepreneurship (branch) of the Don State Technical University. (p.227). Novocherkassk: Lik.

12. Aleshin, B.S., et al. (2004). *Philosophy and social aspects of quality*. - Moscow: Logos.

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RESTORATION OF DISAPPOINTED SEEDS OF TOMATO VARIETIES

Abstract: Relevance of the topic. Today, it is necessary to fully pass on to future generations the varieties created by our people and preserved to this day, to preserve the gene pool and to select varieties suitable for export, which are in demand, to allocate primary sources for selection.

Problem statement. Recently, there has been a disappearance of high-quality, disease-resistant local varieties of tomatoes in the country. However, the preservation of the assortment, gene pool, seed and production of such tomato varieties, as well as their delivery to local consumers is a problem of the industry. Today there is a problem of studying endangered, high-yielding, disease-resistant varieties of tomatoes adapted to local conditions, the creation of local varietal samples and the establishment of primary seed production.

The purpose of the study. To study the disappearing, high-yielding, disease-resistant varieties of tomatoes adapted to local conditions and to establish primary seed production.

Methods. Research work was carried out at the Department of "Vegetable, horticulture and potato growing" of Tashkent State Agrarian University, farm "Khamroev Khalil Bozorovich" Jondor district of Bukhara region for 2019-2020. At the same time, the main task was to sow the seeds of tomato varieties Volgograd 5/95 and Yusupovsky, which have been planted relatively little in the country in recent years, to obtain new seeds of pure variety and to renew their storage.. Of course, seed quality, moisture and storage conditions are important factors in increasing the germination of tomato seeds. The research was carried out in accordance with generally accepted requirements for phenological observations, biometric measurements, determination of disease resistance, yield and seed quality. Study of tomato varieties "Methodology of state sortoispytaniya selskokhozyaystvennykh kultur". Issue IV Kartofel, baxchevye i ovoshchnye kultury (M. Kolos. 1975), «Metodika polevogo opyta» (Dospexov B.A., 1985), «Metodika opytnogo dela v ovoshchevodstve i baxchevodstve» (Belik V.F., 1992), based on the methodologies.

Results of the work. In the cultivation of tomatoes of Volgograd 5/95 and Yusupovsky varieties, the average weight of fruit (128.6 - 269.5 g) is highest in seedlings planted on May 5-10, and relatively low (105.8 - 233.5) when seeds are planted in the ground on April 10-15. g) was found to have weight. The fruit of the Yusupovsky variety of tomato proved to be much larger in weight than the Volgograd 5/95 variety. In the experiment, the seed yield and seed yield of both varieties showed the highest results in the variant planted from seedlings on April 20-25, in Volgograd 5/95 variety seed yield was 19.5 t / ha and seed yield was 55.0 kg / ha and in Yusupovsky variety. seed yield was 22.1 t / ha and seed yield was 28.3 kg / ha. When analyzing the quality of tomato seeds, when the Volgograd 5/95 variety was planted from seedlings on April 20-25, the maximum weight of 1000 seeds was 3.44 grams, and the number of seeds per 1 gram, on the contrary, was 354.7. The results obtained on these indicators in the Yusupovsky navigator were much lower than in the Volgograd 5/95 navigator. The highest rate of this variety was 2.98 grams per 1000 seeds in the variant sown from seedlings on April 20-25, and the number of seeds per 1 gram, on the contrary, was 277.5. The highest rate of germination energy and germination of the obtained seeds was observed

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when both varieties were sown from 5-10 May seedlings. In the Volgograd 5/95 variety it was 81.8-97.6%, and in the Yusupovsky variety it was 79.5-96.9%.

Scope of the results. It is recommended to use the technology of sowing and cultivation of these varieties in agriculture, farms and horticultural farms specializing in vegetables and melons.

Conclusions. Seed yield and seed quality of Volgograd 5/95 and Yusupovsky varieties were determined for cultivation of tomatoes in private farms and farms. We hope that the restoration of endangered varieties of tomatoes in our country, increasing the volume of seeds and the establishment of seed production will bring high economic benefits.

Key words: tomato, variety samples, seeds, cultivation, yield, forgetfulness.

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Introduction

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Today, it is necessary to fully pass on to future generations the varieties created by our people and preserved to this day, to preserve the gene pool and to select varieties suitable for export, which are in demand, to allocate primary sources for selection. Recently, there has been a disappearance of high-quality, disease-resistant local varieties of tomatoes in the country. However, the preservation of the assortment, gene pool, seed and production of such tomato varieties, as well as their delivery to local consumers is a problem of the industry. Therefore, there is a problem of studying the disappearing, high-yielding, disease-resistant varieties of tomatoes adapted to local conditions, the creation of local varietal samples and the establishment of primary seed production. No matter how high the hybrids are, they will need varieties as the primary source to create them. Therefore, the creation and widespread introduction of hybrids is important to maintain the existing gene pool and to restore seed germination from time to time collection specimens.

Restoration of seed germination of tomato collection samples is carried out by replanting them and obtaining new generation seeds. The duration between re-sowing of seeds depends on the viability of the seeds and storage conditions.

The basis for a consistently high yield is the selection of varieties that are adapted to local conditions, resistant to dangerous diseases [1, 3, 7, 8]. Each variety is created for specific soil climatic conditions and requires the use of specific growing technology. The efficiency of selection in production depends on the correct selection and zoning of varieties. [12, 5].

The longevity of seeds, their ability to germinate is determined by the number of years. The main reason for the loss of germination ability of seeds is their exposure to high humidity, especially high temperatures [11]. During the period of morphological maturation, the seeds have the highest germination capacity if there is no weakness of the ovary. Seed viability decreases over time. As a result, germination time is prolonged and germination is reduced. The decrease in forgetfulness is related to storage properties. It can last from a few weeks to 100 years, regardless of the crop and storage conditions. Seeds should be relatively dry and stored in a low humidity environment [9]. For normal germination, the seeds must have a certain level of moisture. The older the seeds, the slower the germination process. Seeds lose their ability to germinate when stored for too long. The process of germination of seeds is affected by temperature, oxygen, light, soil conditions [4].

Methodology.

The research was conducted at the Department of "Vegetable, horticulture and potato growing" of Tashkent State Agrarian University, the farm "Khamroev Khalil Bozorovich" Jondor district of Bukhara region for 2019-2020. At the same time, the main task was to sow the seeds of tomato varieties Volgograd 5/95 and Yusupovsky, which have been planted relatively little in the country in recent years, to obtain new seeds of pure variety and to renew their storage. Of course, seed quality, moisture and storage conditions are important factors in increasing the germination of tomato seeds. In the studies, phenological observations, biometric measurements, determination of disease resistance, observation and calculation of yield and seed quality were carried out in accordance with generally accepted requirements. Study of tomato variety samples "Методика государственного сортоиспытания сельскохозяйственных культур". Выпуск IV Картофель, бахчевые и овощные культуры (М. Колос. 1975) [10], «Методика полевого опыта» (Доспехов Б.А., 1985) [6], «Методика опытного дела в овощеводстве и бахчеводстве» (Белик В.Ф., 1992) [2], based on the methodologies.

During the experiment, the seeds of these varieties obtained in 2014 were sown in the open field in accordance with the recommended methodological methods. During the growing season, varietal plants were selected and pure seeds were obtained from

them. During the study, before flowering of each variety, the plants in the plots were protected with gauze and labels were hung by mixing the variety itself - intsuxt. Once the tomato fruits were biologically ripe, seeds were once again extracted from the variety-specific seeds.

In the experiment, the effect of sowing and cultivation of tomato cultivar samples from seeds and seedlings at different sowing times on seed quality was studied. At the same time, the options for sowing seeds of both varieties in the ground on April 10-15 and 40-day seedlings on April 20-25, May 5-10 and May 15-20 were compared.

The experiment determined the yield of seeds, their seed yield, seed yield and suitability for sowing, as well as crop quality. It is accepted to get quality seeds from 60% of the seeds, and seeds are obtained from the fruits obtained from the second to fourth flower sets of tomato stems. Seed yield was determined by taking the seeds of 10 fruits (3-4 fruits per bunch) from each variant. The fruits obtained were weighed, the seeds were separated from them, dried

and weighed. By comparing the weights of the fruits and seeds, the amount of seeds obtained from the fruits was determined as a percentage. The experiments were performed in four repetitions. Seed yield was calculated by multiplying the weight of seeds obtained from seed fruits per square meter. According to the physical properties of the seeds, the weight of 1000 seeds was determined by determining the number of seeds per 1 g; and the quality of sowing was determined by determining the germination of seeds and germination energy.

Research results.

In determining the quality of seed yield, the effect of seed cultivation methods on the growth, development and productivity of the variety was determined. It is known that seed yield largely depends on the yield of fruits and the emergence of seeds from them. In the experiment, the weight of the seed, seed yield, number and quantity of seeds per fruit, and yield indicators were determined (Table 1).

Table 1. Seed fruit weight, seed yield, number and quantity of seeds per fruit and yield indicators (2019-2020).

Timing of sowing seeds and seedlings	Average weight of fruit, g	Weight of seeds in one fruit, g	Number of seeds per fruit, pcs	Seed content in fruit,%	Seed yield, t / ha	Seed yield, kg / ha
Volgogradskiy 5/95						
Sowing the seeds in the ground on April 10–15	105,8	0,28	103,0	0,26	14,7	38,4
Planting of seedlings on April 20–25	121,7	0,42	118,4	0,34	19,5	55,0
Planting seedlings 5–10 May	128,6	0,37	120,1	0,29	17,0	48,6
Planting seedlings 15–20 May	118,1	0,31	110,3	0,26	12,6	33,7
EKMF05	3,2	0,02	2,6			
Sx,%	2,5	2,0	0,7			
Yusupovskiy						
Sowing the seeds in the ground on April 10–15	233,5	0,25	78,8	0,11	15,8	21,1
Planting of seedlings on April 20–25	256,7	0,49	110,5	0,19	22,1	28,3
Planting seedlings 5–10 May	269,5	0,48	107,2	0,18	20,5	26,6
Planting seedlings 15–20 May	254,4	0,33	98,5	0,13	16,0	20,4
EKMF05	3,6	0,02	4,4			
Sx,%	0,5	1,4	0,8			

In the experiment, the average weight of tomato fruit differed from each other in terms of cultivation methods. At the same time, the options planted with seedlings were higher than those planted directly from seed to the ground. In the variant planted on 5–10 May from seedlings of the Volgograd 5/95 variety, the average weight of the fruit (128.6 g) was highest, and when the seeds were planted in the ground on 10–15 April, the weight was relatively low (105.8 g). It was found that the fruit of the Yusupovsky variety of tomato is much larger in weight than the Volgograd 5/95 variety. Fruits of Yusupovsky variety also had a higher result in terms of weight than in the variant sown from seed (233.5 g), in the variant sown from seedlings 5-10 May (269.5 g). In the remaining options, the figures were low. Of course, the seedlings of both varieties had a positive effect on the average weight of fruits when planted on 5–10 May.

When determining the weight of seeds in one fruit, the variant of tomato planted on April 20–25 from the same seedling in the Volgograd 5/95 and Yusupovsky varieties also showed good results. In this case, the maximum weight of seeds in a single fruit of the Volgograd 5/95 variety is 0.42 g. and Yusupovsky variety 0.49 g. formed. Even on this indicator, the options of tomatoes planted directly from seed were the lowest. It was also found that the greater the weight of the fruit, the greater the weight of the seeds in their composition.

In the experiment, when calculating the average number of seeds per tomato, the highest performance was observed in the Volgograd 5/95 variety in the variant planted on 5-10 May (120.1 pieces). In Yusupovsky variety, when the seedlings were planted on April 20-25 (110.5 pieces), the number of seeds was high. Variations of both varieties planted in the ground from seed showed relatively low levels (103.0–78.8).

When analyzing the percentage of seeds in the fruit, the yield of seedlings of both varieties was highest when planted on April 20-25, ie in the Volgograd 5/95 variety - 0.34%, in the Yusupovsky variety - 0.19%. However, the amount of seeds in the fruit of the Volgograd 5/95 variant of the variant sown from seed and the variant sown from seedling 15–20 May was the same 0.26 percent. The lowest rate in the Yusupovsky variety was 0.11% in the variant planted in the ground from seed.

For all planting methods tested, higher results were obtained from the EKMF values in the seedlings planted than in the options planted directly from seed to the ground.

According to the results of the study, seed yield and seed yield were determined. Depending on the method of sowing and time of planting, the yield of seeds from fruits varied. The highest yield was 19.5 t / ha and 55.0 kg / ha of seeds from Volgograd 5/95 seedlings planted on April 20-25. Also, the variant sown in the ground from seed showed a better result (14.7 t / ha - 38.4 kg / ha) than the variant sown on May 15-20 from seedlings. This, of course, had a positive effect on the yield of the Volgograd 5/95 variety when the seeds were sown with a large number of seed fruits. The variant planted on May 15-20 from seedlings showed a low level (12.6 t / ha - 33.7 kg / ha).

In the variant of seedlings of Yusupovsky variety planted on April 20-25, seed yield and seed yield were the highest (22.1 t / ha - 28.3 kg / ha). However, the lowest seed yield was 15.8 t / ha in the variant sown in the ground on April 10-15, and 20.4 kg / ha in the variant sown in the seedlings on May 15-20, while the remaining variants had a relatively high rate.

In the experiment, seeds from tomato cultivar samples were sorted, weight of 1000 seeds, number of seeds per 1 gram, germination energy of seeds and germination indicators were determined (Table 2).

Table 2. Weight of 1000 seeds, number of seeds per 1 g, germination energy of seeds and germination indicators (2019-2020).

Timing of sowing seeds and seedlings	Weight of 1000 seeds, g	Number of seeds per 1 g, pcs	Seed germination energy,%	Seed germination,%
Volgogradskiy 5/95				
Sowing the seeds in the ground on April 10–15	2,75	398,0	74,5	93,8
Planting of seedlings on April 20–25	3,44	354,7	77,5	94,8
Planting seedlings 5–10 May	3,06	363,6	81,8	97,6
Planting seedlings 15–20 May	2,80	374,6	72,8	93,2
NSR05	0,3			
R%	3,1			

Yusupovskiy				
Sowing the seeds in the ground on April 10–15	2,55	310,5	69,1	92,3
Planting of seedlings on April 20–25	2,98	277,5	74,8	95,5
Planting seedlings 5–10 May	2,81	280,4	79,5	96,9
Planting seedlings 15–20 May	2,73	301,8	71,1	94,6
NSR05	0,1			
R%	1,7			

According to the results obtained, 1000 dry seeds of tomato cultivar samples were counted separately according to the options and their weight was determined. According to the results, the highest rate was 3.44 grams in the variant of seedlings of Volgograd 5/95 variety planted on April 20–25. The lowest figure was 2.75 grams of seeds sown on April 10-15. The remaining options were in the range of these numbers. In the experiment, when counting the number of seeds of tomatoes per 1 gram, the opposite results were obtained. At the same time, the highest result was observed in the variant of Volgograd 5/95 variety sown from seeds on April 10-15, ie 398.0 pieces, and in the variant sown from seedlings on April 20-25, 354.7 pieces. The remaining options were in the range of these numbers.

In the Yusupovsky variety, the results obtained on these indicators were different, ie the weight of 1000 seeds and the number of seeds per 1 gram was much lower than in the Volgograd 5/95 variety. The highest rate in this variety was 2.98 grams in the variant planted from seedlings on April 20–25. The lowest figure was 2.55 grams in the variant sown on April 10-15 from seeds, and the remaining variants were in the range of these figures. When counting and counting the number of seeds per 1 gram of tomatoes, on the contrary, the highest result was obtained in the variant sown from seeds on April 10-15, ie 310.5 pieces, and in the variant sown on April 20-25 from seedlings 277.5 pieces. The remaining options were higher than the option planted during this period.

During the study, laboratory experiments were performed to determine the germination energy and germination of tomato seeds. Laboratory experiments were performed by extracting tomato seeds in a thermostat at a temperature of 22-23 0C. At the same time, 100 seeds of tomatoes grown in different ways and during the growing season were grown in petri dishes, on filter paper soaked in distilled water. The experiment was performed in 4 repetitions. The germination energy of tomato seeds was determined after 5 days, and the germination capacity, i.e. germination, was determined after 15 days (Picture. 1). According to the results, the tomato with the highest germination energy of seeds was 81.8% in the seeds obtained from the variant sown from 5-10 May seedlings of Volgograd 5/95 variety. The relatively low rate was 72.8% in the variant planted on May 15-20. In the seeds obtained from the remaining variants, it was 74.5-77.5%.

In terms of seed germination rates, these sowing methods and timing also yielded relatively high results in the seeds grown. At the same time, 97.6% of the seeds were obtained from the variant of Volgograd 5/95 sown from seedlings on May 5-10. The relatively low rate was 93.2% in the variant planted on May 15-20. In the seeds obtained from the remaining variants, it was 93.8-94.8%.

In the Yusupovsky variety of tomato, these figures showed a different result than in the Volgograd 5/95 variety.

Picture 1. Determination of germination energy and germination of seeds of tomato varieties.

According to laboratory experiments, the highest rate of germination of seeds in the Yusupovsky variety was 79.5% in the variant planted from 5 to 10 May seedlings. However, a relatively low figure was 69.1% of the seeds obtained from the variant sown in the ground on April 10-15. Seeds obtained from the remaining variants were 71.1–74.8%.

The Yusupovsky variety also gave relatively high results in terms of seed germination in the seeds grown in these sowing methods and terms. At the same time, 96.9% of the seeds were obtained from the variant sown from seedlings on May 5-10, and 92.3% from the variant sown from 10-15 May. In the seeds obtained from the remaining variants, it was 94.6-95.5%.

Determining the best method and timing of growing tomato seeds, along with the yield and quality of the seeds, has a high impact on increasing their economic efficiency.

Conclusions.

1. In the cultivation of tomatoes of Volgograd 5/95 and Yusupovsky varieties, the average weight of fruit (128.6 - 269.5 g) is highest in seedlings planted on May 5-10, and relatively low (105.8 - 233) when seeds are planted in the ground on April 10-15. , 5 g) were found to have weight. The fruit of the Yusupovsky variety of tomato proved to be much larger in weight than the Volgograd 5/95 variety.

2. In the experiment, the seeds of the same fruit in both varieties of tomatoes showed better results than other options when sown from seedlings on April 20–25 at the same time in terms of weight and quantity. Bunda Volgograd 5/95 navi 0.42 g. (0.34%) and 0.49 g in Yusupovsky variety. (0.19%).

3. Seed yield and seed yield in both varieties showed the highest results in the variant planted from seedlings on April 20-25, Volgograd 5/95 seed yield was 19.5 t / ha and seed yield was 55.0 kg / ha and Yusupovsky seed yield was 55.0 kg / ha. fruit yield was 22.1 t / ha and seed yield was 28.3 kg / ha.

4. When tomatoes were grown from seedlings of Volgograd 5/95 variety on April 20-25, the maximum weight of 1000 seeds was 3.44 grams, and the number of seeds per 1 gram, on the contrary, was 354.7. The results obtained on these indicators in the Yusupovsky navigator were much lower than in the Volgograd 5/95 navigator. The highest rate of this variety was

2.98 grams per 1000 seeds in the variant sown from seedlings on April 20-25, and the number of seeds per 1 gram, on the contrary, was 277.5.

5. The highest rate of germination energy and germination of the obtained seeds was observed when both varieties were sown from 5-10 May seedlings. In the Volgograd 5/95 variety it was 81.8-97.6%, and in the Yusupovsky variety it was 79.5-96.9%.

References:

1. Bakulina, V.A. (1988). Sort - osnova tehnologii. *J. Kartofel` i ovoshhi,* Moskva, № 1, pp. 14- 20.
2. Belik, V.F. (1970). *Metodika fiziologicheskih issledovanij v ovoshhevodstve i bahchevodstve*. (p.211). Moskva.
3. Bolotskih, A.S., & Prihod`ko, V.M. (1999). Sort- vazhnoe zveno adaptivnoj tehnologii. *J. Kartofel` i ovoshhi,* Moskva, № 5, p. 26.
4. Bўriev, H.Ch. (1999). *«Sabzavot jekinlari selekcijasi va uruℊchiligi»*. (pp.34-66). Tashkent: Meҳnat.
5. Goncharov, P.L. (2000). *Koncentracija razvitija issledovanij po selekcii na kachestvo*. Selek.s/h k-r na kachestvo: Mat. Nauch.-metod. Konf, (pp.5-8). Novosibirsk.
6. Dospehov, B.A. (1985). *Metodika polevogo opyta*. (p.351). Moskva: Agropromizdat.
7. Zhuchenko, A.A. (2002). K problemam nauchnogo obespechenija ovoshhevodstva. *J. Kartofel` i ovoshhi*, Moskva, № 2, pp. 2-5.
8. Zhuchenko, A.A. (2008). *Tendencii i prioritety razvitija selekcii i semenovodstva v HHI veke. Sovremennye tendencii selekcii i semenovodstve ovoshhnyh kul`tur*. Mezhdunarodnoj nauchno-prakticheskoj konferencii. Materialy, (pp.10-37). Moskva: VNIISSOK. T. 1.
9. Krug, G. (2000). *Semena, semennoj i posadochnoj material*. Ovoshhevodstvo. Perevod s nemeckogo, (pp.108-114). Moskva: Kolos.
10. (1975). *Metodika gosudarstvennogo sortoispytanija sel`skohozjajstvennyh kul`tur*. Vypusk IV Kartofel`, ovoshhnye i bahchevye kul`tury, (p.180). Moskva: Kolos.
11. Muhin, V.D. (2003). *Harakteristika posadochnogo i posevnogo materiala*. Ovoshhevodstvo. (pp.103-112). Moskva: Kolos.
12. Ostonakulov, T.Je. (2002). *Selekcija va urugchilik*. (p.272). Tashkent: Istiklol.

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POSSIBILITIES OF MODERN INNOVATIVE TECHNICAL PROCESSES FOR MANUFACTURING DEMANDED PRODUCTS TAKING INTO ACCOUNT CONSUMER PREFERENCES AND AN UNSTABLE MARKET

Abstract: *In an article by the authorsan assortment policy was developed for the formation of competitive men's, women's and children's shoes, taking into account factors affecting consumer demand: compliance with the main fashion trends, economic, social and climatic characteristics of the regions of the Southern Federal District and the North Caucasus Federal District, the production of which using modern innovative technological processes, as well as to meet demand elite consumer, using manual labor, create the basis for meeting the demand for footwear for the buyer of these regions, including the development of innovative technological processes for the production of men's, women's and children's shoes using modern technological equipment with advanced nano technologies,forming the basis for reducing the cost of footwear and providing it with an increase in competitiveness with the products of leading foreign companies, with the possibility of a wide assortment of footwear not only by type, but also by fastening methods, which guarantees its demand in full.*

Key words: *model, assortment policy, technological innovation process, consumer preferences, demand, demand, profit, unstable market, competitiveness, import substitution, nano technologies, stable financial condition, stable TP.*

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Introduction

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To select the optimal capacity, the authors have developed software that allows manufacturers, based on an innovative technological process using universal and multifunctional equipment, to produce the entire assortment of shoes with minimum, average and maximum costs, which creates the basis for varying the price niche, including through a gradual increase in the share of domestic components in the production of leather goods with a significant reduction in the cost of its manufacture. At the same time, as the criteria for a reasonable choice of the optimal power when forming the algorithm, it was justified to choose exactly those criteria that have the greatest impact on the cost of the finished product, namely:

- coefficient of workload of workers,%;
- productivity of labor of one worker, a pair;
- losses on wages per unit of production, rubles;
- specific reduced costs for 100 pairs of shoes, rub.

Of the four given criteria, in our opinion, the main ones are labor productivity of 1 worker and unit reduced costs.

Labor productivity of 1 worker is the most important labor indicator. All the main indicators of production efficiency and all labor indicators, to one degree or another, depend on the level and dynamics of labor productivity: production of products, number of employees, expenditure of wages, level of wages, etc.

To increase labor productivity, the introduction of new equipment and technology, widespread mechanization of labor-intensive work, automation of production processes, advanced training of workers and employees, especially when introducing innovative technological processes based on universal and multifunctional equipment, are of paramount importance.

Specific reduced costs - an indicator of the comparative economic efficiency of capital investments, used when choosing the best option for solving technological problems.

When comparing possible options for solving any technical problem, rationalization proposals, technical improvements, various ways to improve product quality, the best option, all other things being equal, is the option that requires a minimum of the reduced costs.

Main part

The given costs are the sum of current costs taken into account in the cost of production and one-time capital investments, the comparability of which with current costs is achieved by multiplying them by the standard coefficient of the efficiency of capital investments. Tables 1 and 2 show the calculations of the optimal power for the range from 300 to 900 pairs for men's and women's shoes for the entire range of footwear. Analysis of the characteristics obtained for three variants of a given technological process in the manufacture of the entire assortment of footwear confirmed the effectiveness of the software product for evaluating the proposed innovative technological process using universal and multifunctional equipment. So, with a range of 300 - 900 pairs, the best according to the given criteria is the volume of production of 889 pairs (for men) and 847 pairs (for women). If the production areas proposed by the regional and municipal authorities of the two districts - the Southern Federal District and the North Caucasus Federal District, according to the standard indicators, do not allow the calculated production volumes to be realized, then the option of the optimal capacity is chosen that is acceptable, for example, the production volume of 556 pairs, which corresponds to the standard indicators for the proposed production areas and is characterized by the best values of the designated criteria, which form the cost of the entire assortment of footwear. The authors have developed consolidated technological processes on the side of the blank of the upper of the shoe and for the assembly of shoes, respectively, for 12 models of men's and 12 models of women's shoes (Fig. 1 and 2). Tables 3 and 9 provide an example of the initial technological process for assembling the upper and shoe blanks using the example of a men's winter boot (model D). The summarized volumes of the main costs are shown in Table 10.

Table 1 - Calculation of the optimal power with a range of 300-900 couples on the example of men's shoes

Power	Equipment type	Optimal power, steam per shift	Labor productivity of 1 worker, steam	Worker load factor,%	Losses on wages per unit of production, rub	Specific reduced costs per 100 pairs of shoes, rub
300-500	1	500	28.09	61.39	13.68	6735.36
500-700	1	556	27.73	69.14	9.83	6404.71
700-900	1	889	28.09	77.20	6.42	5236.17
300-500	2	500	28.09	61.39	13.68	6728.68
500-700	2	556	27.91	68.70	9.97	6083.28
700-900	2	889	28.09	77.20	6.42	5240.72
300-500	3	500	28.09	61.39	13.68	7533.95
500-700	3	700	28.12	67.28	10.56	6734.02
700-900	3	889	28.09	77.20	6.42	5876.59

Table 2 - Calculation of the optimal power with a range of 300-900 couples on the example of women's shoes

Power options	Equipment type	Optimal power, steam per shift	Performance labor of 1 worker, couples	Worker load factor,%	Losses on wages per unit of production, rub	Specific reduced costs per 100 pairs of shoes, rub
300-500	1	500	27.73	62.18	13.40	6980.5
500-700	1	700	27.73	69.14	9.83	6277.43
700-900	1	847	27.73	74.50	7.54	5673.49
300-500	2	500	24.45	63.90	14.11	7630.92
500-700	2	556	27.73	69.14	9.83	6404.71
700-900	2	812	25.64	75.40	7.77	6060.55
300-500	3	500	27.00	61.74	14.02	7827.12
500-700	3	556	29.32	68.21	9.71	6607.65
700-900	3	847	27.00	74.70	7.66	6341.05

T a b l e 3 - Characteristics of the equipment for assembling the blanks of autumn women's boots (model E)

the name of the operation	1 set of equipment for innovative technological process							2 set of equipment for innovative technological process							3 set of equipment for innovative technological process						
	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price
Receiving and checking the cut	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Cutting into production	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Lowering the edges of the outer baby top and lining	SS20	135 kg	Comels	1050*550*1030	1.2 kW	75 pairs per hour	217 140 rub	3SE-RZ	140 KG	Fortuna (Germany)	1050*540*1160	0.5 kW	77 pairs/h	156,000 rbl	011 46/P5	130 Kg	Sweet (Czech Republic)	1050*540*1190	0.7 kW	63 pairs per hour	178,000 rbl
Duplication of upper details with interlining	A2000	180 Kg	Sabal (Italy)	1430*780*950	2.1 kW	150 pairs per hour	RUR 185640	C1100V	180 Kg	Schön (Germany)	1800*130*950	0.8 kW	150 pairs per hour	123 150 rub	PR86A	180 Kg	NEVE (Italy)	1250*900*1350	3.1 kW	150 pairs per hour	123500 rub
Bending with simultaneous application of hot melt glue, notching of curved sections and gluing tape	RP67TE	180 KG	Sagita (Italy)	1100*550*1270	0.75 kW	60 pairs per hour	402 090 rub	S1031C	170 kg	Schön (Germany)	1050*550*1200	1.0 kW	60 pairs per hour	234500 rub	012 80/P1	186 kg	Sweet (Czech Republic)	900*600*1280	0.5 kW	65 pairs per hour	320,700 rbl

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Operation																				
Adjusting tibia detail 1 to tibia detail 2	491 GRAMAC	130 Kg	Granucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM00 002	130 Kg	Durkopp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaf 591-726 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	-	79400 rbl
Glueing ankle boots and elastic bands for assembly. Drying	ST-B with vyt	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Gluing ankle boots on elastic bands	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Attaching elastic bands to the ankle boots with the 1st line	491 GRAMAC	130 Kg	Granucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM00 002	130 Kg	Durkopp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaf 591-726 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	-	79400 rbl
Tightening the vamp on the ankle boots	Pfaff 574-900 cl	130 Kg	"PFAFF" Germ	520*180	0.27 kW	-	79600 rub	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Typ ical GC 240 26	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl
Tapering of the back edges of the ankle boots with a stitching seam	491 GRAMAC	130 Kg	Granucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM00 002	130 Kg	Durkopp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaf 591-726 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	-	79400 rbl

Operation	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price
Smoothing the back seam while applying the tape	DELTA CB	150 Kg	Sarema (Italy)	800*1200*1740	1.7	-	RUB 31080	01276/P12	135 kg	"Sweet" Czech Republic	900*510*1380	0.175 kW	500 pairs/hour	18000 rub	012 76/P12	135 kg	"Sweet" Czech Republic	900*510*1380	0.175 kW	500 pairs/hour	18000 rb
Spreading with glue and gluing ZNR on the heel of the workpiece	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Top hemming	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Adjustment of ZNR	491 GRAM AC	130 Kg	Granucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM00002	130 Kg	Durko pp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaff 591-726 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	-	7940 rb
Adjusting the leather pocket on the lining under the ankle boots	491 GRAM AC	130 Kg	Granucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM00002	130 Kg	Durko pp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaff 591-726 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	-	7940 rb
Attaching the leather lining of the ankle boots to the textile lining of the vamp	491 GRAM AC	130 Kg	Granucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM00002	130 Kg	Durko pp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaff 591-726 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	-	7940 rb

Operation	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price
Tearing of the lining at the back edge with a stitch seam and trimming the edges of the lining	GP 2	120 kg	Colli (Italy)	900*500*850	0.27 kW	-	190,000 rubles
	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	190,000 rubles
	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	190,000 rubles
Smoothing the back seam of the leather lining	DELTA CB	150 Kg	Sarema (Italy)	800*1200*1740	1.7	-	-
	01276/P12	135 kg	"Sweet" Czech Republic	900*510*1380	0.175 kW	500 pairs/hour	18000 rbl
	012 76/P12	135 kg	"Sweet" Czech Republic	900*510*1380	0.175 kW	500 pairs/hour	18000 rbl
Bonding a thermoplastic toe cap between top and lining	A 2000	180 Kg	Sabal (Italy)	1430*780*950	2.1 kW	150 pairs per hour	RUR 185640
	C 1100V	180 Kg	Schön (Germany)	1800*130*950	0.8 kW	150 pairs per hour	123150 rub
	PR 86 A	180 Kg	NEVE (Italy)	1250*900*1350	3.1 kW	150 pairs per hour	123500 rub
Glueing and gluing the assembly of the outer and inner parts of the top along the edge line	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Stitching of the edge of the ankle boots with simultaneous trimming of the edges of the leather lining and attaching the elastic with the second line	GP 2	120 kg	Colli (Italy)	900*500*850	0.27 kW	-	
	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	190,000 rubles
	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	190,000 rubles

	G12/1	100 Kg	GEL mini	760*855*1480	1.9 kW	120 pairs / hour	54,000 rbl	KARO1	80 Kg	Leibrock (Germany)	520*1100*1370	2.2 kW	150 pairs per hour	54,000 rbl	SP75AR	70 Kg	"NEVE" Italy	1100*900*1400	1.0 kW	120 pairs per hour	54,000 rbl
Cleaning ZVO																					
Accounting for production and return by performer	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Acquisition of ZVO in growth. assortment, bundling, accounting	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
The amount of equipment costs	**RUB 1,972,560**							**RUB 1,035,156**							**RUB 1,163,312**						

T a b l e 4 - **Characteristics of equipment for assembling shoes for autumn women's boots (model E)**

the name of the operation	1 set of equipment for innovative technological process							2 set of equipment for innovative technological process							3 set of equipment for innovative technological process						
	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price
Receiving blanks;	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Pads selection and cleaning	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B

Option 1

Operation	Code	Mass	Machine (country)	Dimensions	Power	Productivity	Cost
Humidification of the ZVO	UT 12	100 Kg	Stema (Italy)	620*550*1230	12 kWt	120 per shift	231,000 rbl
Pre-fastening of the insoles to the last with metal staples	10/11/C	630 kg	"BESSER" Italy	800*900*1800	0.5 kWt	250 pairs/h	RUB 250,000
Spreading talcum powder	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Insertion of backdrops from thermoplastic materials, pre-molding of the heel of the blanks	74 EE/S	670 kg	Cerim (Italy)	950*600*1500	2,5 kW	150 pairs per hour	RUB 531,720
Putting on the shoe upper blank on the last and installing the heel part	02015/P5	120 kg	Sweet (Czech Republic)	600*745*1700	0.24 kW	150 pairs per hour	RUB 250,000

Option 2

Operation	Code	Mass	Machine (country)	Dimensions	Power	Productivity	Cost
Humidification of the ZVO	URP/2	110 Kg	ISM (Germany)	645*2485*1700*26	12 kWt	135 pairs per hour	RUB 150,000
Pre-fastening of the insoles to the last with metal staples	10/11/C	630 kg	"BESSER" Italy	800*900*1800	0.5 kW	250 pairs/h	RUB 250,000
Spreading talcum powder	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Insertion of backdrops from thermoplastic materials, pre-molding of the heel of the blanks	1005/2	630 kg	Scheen Germany	900*500*1900	2,5 kW	800 pairs per hour	230,700 rbl
Putting on the shoe upper blank on the last and installing the heel part	02015/P5	120 kg	Sweet (Czech Republic)	600*745*1700	0.4 kW	150 pairs per hour	RUB 250,000

Option 3

Operation	Code	Mass	Machine (country)	Dimensions	Power	Productivity	Cost
Humidification of the ZVO	U 17 BFV	100 Kg	Stema (Italy)	620*550*1230	12 kWt	120 pairs per hour	RUB 170,000
Pre-fastening of the insoles to the last with metal staples	0405/4/P1	650 kg	"Sweet" Czech Republic	800*900*1800	0.27	250 pairs/h	280,000 rubles
Spreading talcum powder	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Insertion of backdrops from thermoplastic materials, pre-molding of the heel of the blanks	E 605	690 kg	"SELMAK" Italy	810*700*1720	1.8 kW	150 pairs per hour	RUB 210,000
Putting on the shoe upper blank on the last and installing the heel part	02015/P5	120 kg	Sweet (Czech Republic)	600*745*1700	0.4 kW	150 pairs per hour	RUB 250,000

Operation	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price
Covering and tightening of the toe-bundle part of the ZVO with hot melt glue with preliminary moistening of the toe-bundle part, insertion and activation of the toe cap	K73STIK	1350kg	Cerim (Italy)	173 * 114 * 184	5.46 kW	350 steam per hour	RUB 1758120
	SZH-9CD	1200 KG	Leibrock (Germany)	1700 * 1200 * 1750	4.0 kW	160 pairs per hour	RUB 1,577,800
	K78SZ	1250 kg	Sweet (Czech Republic)	110 0* 105 0* 170 0	5.38 kW	220 pairs per hour	RUB 1,586,800
Tightening the gel part of the ZVO with brackets	K201T	900 kg	Cerim (Italy)	1000 * 1230 * 2055	5.46 kW	200 steam per hour	RUB 1,200,000
	640 TT	860 kg	Scheen Germany	1200 * 800 * 2000	3.25 kW	250 pairs per hour	RUB 1,400,000
	0221 2/ P1	850 kg	Sweet (Czech Republic)	640 * 715 * 170 0	0.42 kW	180 pairs per hour	RUB 1,200,000
Tightening the heel of the workpieces	PIC K24 SZ	1100 kg	"CERIM" Italy	1600 * 230 * 2100	5.5 kw	200 pairs /h	RUB 1,851,000
	640 TM	900 kg	Schön (Germany)	1200 * 800 * 1600	3.25 kW	250 pairs /h	RUB 1,750,000
	PIC K24 SZ	110 0 kg	"CERIM" Italy	160 0* 230 * 210 0	5.5 kw	200 pairs / h	RUB 1,851,000
Wet-heat treatment of shoes	MV 5700	125 0 kg	IRON FOX (Italy)	3050 * 1000 * 1450	27.9 kW	300 pairs in 8 hours	142840 rub
	333E	120 0kg	Schön (Germany)	1400 * 2100 * 950	13.0 kW	250 pairs per hour	122840 rub
	1800 42/ P2	113 0kg	Sweet (Czech Republic)	966 * 307 0* 146 5	15.0 kW	180 pairs per hour	142840 rub
Hot air smoothing of creases on shoes	RTO7	80 Kg	IRON FOX (Italy)	450 * 330 * 1100	2.0 kW	100 pairs per hour	RUB 63,000
	F1	80KG	Leibrock (Germany)	450 * 330 * 1100	6.0	600 pairs	154740 rub
	SR1 006	90 kg	ELVI (Italy)	580 * 608 * 145 0	0.18 k W	65-113 pairs / hour	155,000 rbl

Operation	Machine A Code	Weight	Brand	Dimensions	Power	Capacity	Price	Machine B Code	Weight	Brand	Dimensions	Power	Capacity	Price	Machine C Code	Weight	Brand	Dimensions	Power	Capacity	Price
Removing braces and tex from insoles	CF768N	228 kg	Cosmopol (Italy)	1480*1100*750	2.0 kW	100 pairs per hour	428400 rub	RW2-G	150 Kg	Leibrock (Germany)	700*700*1030	3.5 kW	150 pairs per hour	540,000 rubles	R254	190 kg	Sweet (Czech Republic)	990*1510*1510	5.25 kW	180 pairs per hour	273,000 rbl
Trimming excess draw-off edge, ruffle draw-in edge, dust removal	A200/D	100 Kg	GEL mini	760*855*1480	1.9 kW	120 pairs / hour	1000000rub	D510	120 kg	Stema (Italy).	820*360*1215	1.1 kW	150 pairs per hour	120,000 rbl	A200/D	100 Kg	GEL mini	760*855*1480	1.9 kW	120 pairs / hour	1000000rub
Treatment of the slow surface of the soles	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub
First glue on the lingering edge and low-running surface of the sole, drying	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub
The second spreading of glue on the lingering edge and the slow surface of the sole, drying	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub	02068/P4	250 Kg	Sweet (Czech Republic)	650*500*1250	2,5 kW	150 pairs per hour	127900 rub
Activation of adhesive films and gluing of soles	FR27/2M	300 Kg	GRANUCCI (Italy)	700*700*1030	1.5kw	250 pairs per hour	RUB 900 480	133	350 Kg	Italy	600*650*1380	2.0 kW	250 pairs per hour	13000rub	133	350 Kg	Italy	600*650*1380	2.0 kW	250 pairs per hour	13000rub

Block 1

Operation	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price
Bonding soles	755 PC	450 Kg	Sigma (Italy)	760*855*1480	1.5 kW	150 pairs per hour	12,700,000 rubles
Cooling shoes after pressing	TR19	300 Kg	Stema (Italy).	1500*1000*1760	2.0 kW	600-800 pairs/h	RUB 504,000
Cleaning the top and bottom of shoes	G12/1	100 Kg	GEL mini	760*855*1480	1.9 kW	120 pairs/hour	54,000 rbl
Removing shoes from the last	LO2	205 kg	Omsa (Italy)	1130*800*500	1.5 kW	300 pairs per hour	359,520 rub
Attaching heels from the inside	UVS80	140 kg	GRANUCCI (Italy)	700*600*1900	0.1 kW	100 pairs per hour	RUB 238,740

Block 2

Operation	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price
Bonding soles	755 PC	450 Kg	Sigma (Italy)	760*855*1480	1.5 kW	150 pairs per hour	RUB 1,270,000
Cooling shoes after pressing	FR3200	400 Kg	IRONFOX (Italy)	1500*1500*1760	1.9 kW	900-1000 pairs/h	198,000 rbl
Cleaning the top and bottom of shoes	KARO1	80 Kg	Leibrock (Germany)	520*1100*1370	2.2 kW	150 pairs per hour	84790 rub
Removing shoes from the last	ASL-1	80 Kg	Leibrock (Germany)	420*330*1100	1.3kw	250 pairs per hour	186,000 rbl
Attaching heels from the inside	123LHE	180 ru	Schön (Germany)	800*850*2100	0.6 kW	125 steam per hour	RUB 190,200

Block 3

Operation	Model	Weight	Manufacturer	Dimensions	Power	Productivity	Price
Bonding soles	755 PC	450 Kg	Sigma (Italy)	760*855*1480	1.5 kW	150 pairs per hour	RUB 1,270,000
Cooling shoes after pressing	TR22	500 Kg	Stema (Italy).	1100x2800x1760	2.0 kW	from 1000 to 2000 pairs/h	583 800 rub
Cleaning the top and bottom of shoes	SP75AR	70 Kg	"NEVE" Italy	1100*900*1400	1.0 kW	120 pairs per hour	54,000 rbl
Removing shoes from the last	LP1	120 kg	Stema (Italy).	820*360*1215	1.1 kW	250 pairs per hour	352800 rub
Attaching heels from the inside	04222/P1	135 kg	Sweet (Czech Republic)	550*800*1475	0.42 kW	150 pairs per hour	RUB 185600

	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R	attachment PES-R
Checking and cleaning nails inside shoes	ST-B	G12/1	ST-B	100 Kg	ST-B	GEL mini	ST-B	760 * 855 * 1480	ST-B	1.9 kW	ST-B	120 pairs / hour	ST-B	54,000 rbl	ST-B						
Bonding heel pads and insoles	ST-B	TL 75	ST-B	155 kg	ST-B	GRANUCCI (Italy)	ST-B	1850 * 950 * 1000	ST-B	2.0 kW	ST-B	150 pairs / hour	ST-B	98240 rub	ST-B						
Retouching the top of the shoe	ST-B	341/BF	ST-B	115 ru	ST-B	IRON FOX (Italy)	ST-B	750 * 600 * 1800	ST-B	0.25	ST-B	1500 pairs / 8h	ST-B	RUB 40 320	ST-B						
Finishing the upper of the shoe	ST-B	ST-UO	ST-B	ST-UO	ST-B	ST-UO	ST-B	ST-UO	ST-B	ST-UO	ST-B	ST-UO	ST-B	ST-UO							
Shoe marking	ST-B	KAR O 1	ST-B	80 Kg	ST-B	Leibrock (Germany)	ST-B	520 * 1100 * 1370	ST-B	2.2 kW	ST-B	150 pairs per hour	ST-B	84790 rub	ST-B	SP75 AR	ST-B	70 Kg	ST-B	"NEVE" Italy	ST-B
Quality control	ST-B	TL 75	ST-B	155 kg	ST-B	GRANUCCI (Italy)	ST-B	1850 * 950 * 1000	ST-B	2.0 kW	ST-B	150 pairs / hour	ST-B	98240 rub	ST-B	TL 75	ST-B	155 kg	ST-B	GRANUCCI (Italy)	ST-B
Shoe packaging	ST-UO	341/BF	ST-UO	115 ru	ST-UO	IRON FOX (Italy)	ST-UO	750 * 600 * 1800	ST-UO	0.25	ST-UO	150 children / hour	ST-UO	RUB 40 320	ST-UO	0505 4/P6	ST-UO	110 Kg	ST-UO	Sweet (Czech Republic)	ST-UO

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T a b l e 5 - Characteristics of the equipment for assembling the workpiece model G (men's boots)

the name of the operation	1 set of equipment for innovative technological process							2 set of equipment for innovative technological process							3 set of equipment for innovative technological process						
	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Receiving and checking the cut	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Cutting into production	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Lowering the edges of the outer baby top and lining	SS 20	135 kg	Comels	1050*550*1030	1.2 kW	75 pairs per hour	15900 rbl	3SE-RZ	140 KG	Fortuna (Germany)	1050*540*1160	0.5 kW	77 pairs / h	15600 rbl	011 46/P5	130 Kg	Swet (Czech Republic)	1050*540*1190	0.7 kW	63 pairs per hour	17800 rbl
Bending with simultaneous application of hot melt glue, notching of curved sections and gluing tape	RP67 TE	180 KG	Sagitta (Italy)	1100*550*1270	0.75 kW	60 pairs per hour	402 090 rub	S103 1C	170 kg	Schön (Germany)	1050*550*1200	1.0 kW	60 pairs per hour	234500 rub	012 80/P1	186 kg	Swet (Czech Republic)	900*600*1280	0.5 kW	65 pairs per hour	320,700 rbl
Delivery of shoes to the warehouse, paperwork	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
The amount of equipment costs	RUB 10,453,280							RUB 8,906,320							RUB 9,110,930						

Operation		Sabal (Italy) group							Schön (Germany) group							NEVE (Italy) group				
Duplication of upper details with interlining	M107\R	180 Kg	Sabal (Italy)	1430*780*950	2.1 kW	150 pairs per hour	RUR 185640	C 1100 V	180 Kg	Schön (Germany)	1800*130*950	0.8 kW	150 pairs per hour	123 150 rub	PR 86 A	180 Kg	NEVE (Italy)	1250*900*1350	3.1 kW	150 pairs per hour	123500 rub
Spreading with glue and gluing inter-block blocks	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Adjusting the sock to the vamp	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Typical GC24 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	-	79600 rub
Glueing and stitching the vamp onto the tongue	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Typical GC24 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	-	79600 rub
Tucking darts on the back	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Typical GC24 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	-	79600 rub
Spreading with glue and stitching the back to the ankle boots	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Typical GC24 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	-	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	-	79600 rub

Operation																					
Adjusting the overhead protectors on the ankle boots	Typical GC24 680	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	5822 rbl	Typical GC2 4026	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	5822 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520 * 180	0.27 kW	-	79600 rub
Glueing and gluing the vamp on the ankle boots	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Tightening the vamp on the ankle boots while attaching the tongue	Typical GC24 680	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	5822 rbl	Typical GC2 4026	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	5822 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520 * 180	0.27 kW	-	79600 rub
Punching holes for lacing	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Adjusting the leather pocket on the leather lining under the ankle boots	491 GRA MAC	130 Kg	Gra nucci (Italy)	520 * 180	1.76 kW	-	211596 rub	4180 i-511 E5 BM0 0002	130 Kg	Durkopp Adler	900 * 500 * 850	0.27 kW	-	132090 rub	Pfaff 591-900 cl	130 Kg	Pfaff (Germany)	900 * 500 * 850	0.27	-	79400 rbl
Adjusting the leather lining under the ankle boots to the textile lining under the vamp;	491 GRA MAC	130 Kg	Gra nucci (Italy)	520 * 180	1.76 kW	-	211596 rub	4180 i-511 E5 BM0 0002	130 Kg	Durkopp Adler	900 * 500 * 850	0.27 kW	-	132090 rub	Pfaff 591-900 cl	130 Kg	Pfaff (Germany)	900 * 500 * 850	0.27	-	79400 rbl
Spreading with glue gluing the outer and inner nodes of the upper parts	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt

T a b l e 6 - Characteristics of equipment for assembling shoes model G (men's boots)

the name of the operation	1 type of equipment							2 type of equipment							3 type of equipment						
	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price	vendor code	weight	manufacturer	dimensions	power	performance	price
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Receiving and checking the cut	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Stitching the workpiece along the edge line with simultaneous trimming of the edges of the leather lining;	GP 2	120 kg	Coll i (Italy)	900*500*850	0.27 kW	-	54,000 rbl	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	54,000 rbl	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	54,000 rbl
Shoe uppers cleaning	G12/1	100 Kg	GEL mini	760*855*1480	1.9 kW	120 pairs/hour	19,000 rbl	KAR O 1	80 Kg	Leibrock (Germany)	520*1100*1370	2.2 kW	150 pairs per hour	19,000 rbl	SP7 5AR	70 Kg	"NEVE" Italy	1100*900*1400	1.0 kW	120 pairs per hour	19,000 rbl
Lacing the shoe upper	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Quality control, procurement of blanks, delivery to the warehouse	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
The amount of equipment costs	RUB 946 438							636552 rub							RUB 694,000						

Operation	ST-B Model	ST-B Weight	ST-B Manufacturer	ST-B Dimensions	ST-B Power	ST-B Productivity	ST-B Price	ST-B Model	ST-B Weight	ST-B Manufacturer	ST-B Dimensions	ST-B Power	ST-B Productivity	ST-B Price	ST-B Model	ST-B Weight	ST-B Manufacturer	ST-B Dimensions	ST-B Power	ST-B Productivity	ST-B Price
Cutting into production	SS 20	135 kg	Comels	1050 * 550 * 1030	1.2 kW	75 pairs per hour	15900 rbl	3SE-RZ	140 KG	Fortuna (Germany)	1050 * 540 * 1160	0.5 kW	77 pairs / h	15600 rbl	011 46 / P5	130 Kg	Swet (Czech Republic)	1050 * 540 * 1190	0.7 kW	63 pairs per hour	17800 rbl
Lowering the edges of the outer baby top and lining	RP67 TE	180 KG	Sagitta (Italy)	1100 * 550 * 1270	0.75 kW	60 pairs per hour	402 090 rub	S1031C	170 kg	Schön (Germany)	1050 * 550 * 1200	1.0 kW	60 pairs per hour	234500 rub	012 80 / P1	186 kg	Swet (Czech Republic)	900 * 600 * 1280	0.5 kW	65 pairs per hour	320,700 rbl
Bending with simultaneous application of hot melt adhesive,	M107\R	180 Kg	Sabal (Italy)	1430 * 780 * 950	2.1 kW	150 pairs per hour	RUR 185640	C1100V	180 Kg	Schön (Germany)	1800 * 130 * 950	0.8 kW	150 pairs per hour	123150 rub	PR 86 A	180 Kg	NEVE (Italy)	1250 * 900 * 1350	3.1 kW	150 pairs per hour	123500 rub
Duplication of upper details with interlining	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Spreading with glue and gluing inter-block blocks	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Adjusting the sock to the vamp	Typical GC24 680	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	58212 rbl	Typical GC2 4026	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520 * 180	0.27 kW	-	79600 rub
Glueing and stitching the vamp onto the tongue	Typical GC24 680	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	58212 rbl	Typical GC2 4026	130 Kg	Typical (China)	900 * 500 * 850	0.27 kW	-	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520 * 180	0.27 kW	-	79600 rub

Operation	Machine 1						Machine 2						Machine 3					
	Model	Weight	Manufacturer	Dimensions	Power	Price	Model	Weight	Manufacturer	Dimensions	Power	Price	Model	Weight	Manufacturer	Dimensions	Power	Price
Tucking darts on the back	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Typical GC2 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	79600 rub
Spreading with glue and stitching the back to the ankle boots	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Typical GC2 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	79600 rub
Adjusting the overhead protectors on the ankle boots	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Typical GC2 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	79600 rub
Glueing and gluing the vamp on the ankle boots	ST-B with vyt.	ST-B with vyt	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.	ST-B with vyt.
Tightening the vamp on the ankle boots while attaching the tongue	Typical GC24 680	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Typical GC2 4026	130 Kg	Typical (China)	900*500*850	0.27 kW	58212 rbl	Pfaff 574-900 cl	130 Kg	"PFAFF" Germany	520*180	0.27 kW	79600 rub
Punching holes for lacing	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Adjusting the leather pocket on the leather lining under the ankle boots	491 GRA MAC	130 Kg	Granucci (Italy)	520*180	1.76 kW	211596 rub	4180 i-511 E5 BM00002	130 Kg	Durkopp Adler	900*500*850	0.27 kW	132090 rub	Pfaff 591-900 cl	130 Kg	Pfaff (Germany)	900*500*850	0.27	79400 rbl

Operation	Model (1)	Weight (1)	Brand (1)	Dimensions (1)	Power (1)	Productivity (1)	Price (1)	Model (2)	Weight (2)	Brand (2)	Dimensions (2)	Power (2)	Productivity (2)	Price (2)	Model (3)	Weight (3)	Brand (3)	Dimensions (3)	Power (3)	Productivity (3)	Price (3)
Adjusting the leather lining under the ankle boots to the textile lining under the vamp;	491 GRA MAC	130 Kg	Gran ucci (Italy)	520*180	1.76 kW	-	211596 rub	4180i-511 E5 BM0 0002	130 Kg	Durko pp Adler	900*500*850	0.27 kW	-	132090 rub	Pfaff 591-900 cl	130 Kg	Pfaff (German y)	900*500*850	0.27	-	79400 rбl
Spreading with glue gluing the outer and inner nodes of the upper parts	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B wit h vyt	ST-B with vyt	ST-B with vyt	ST-B wit h vyt	ST-B wit h vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt	ST-B with vyt
Stitching the workpiece along the edge line with simultaneous trimming of the edges of the leather lining;	GP 2	120 kg	Coll i (Italy)	900*500*850	0.27 kW	-	19,000 rбl	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	19,000 rбl	GP 2	120 kg	Colli (Italy)	900*500*850	0.27	-	19,000 rбl
Shoe uppers cleaning	G12 / 1	100 Kg	GEL mini	760*855*1480	1.9 kW	120 pairs / hour	54,000 rбl	KAR O 1	80 Kg	Leibr ock (Ger many)	520*1100*1370	2.2 kW	150 pairs per hour	54,000 rбl	SP7 5AR	70 Kg	"NE VE" Italy	1100*900*1400	1.0 kW	120 pairs per hour	54,000 rбl
Lacing the shoe upper	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
Quality control, procurement of blanks, delivery to the warehouse	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B	ST-B
The amount of equipment costs	RUB 946 438							636552 rub							RUB 694,000						

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Table 7 - Consolidated innovative technological process for assembling the blanks for the top of the assortment range for men's shoes

Name of operations	Model 1 winter	Model 2 winter	Model 3 winter	Model 4 spring	Model 5 spring	Model 6 spring	Model 7 years	Model 8 years	Model 9 years	Model 10 autumn	Model 11 autumn	Model 12 autumn
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Receiving and checking the cut	+	+	+	+	+	+	+	+	+	+	+	+
2. Starting the cut into production	+	+	+	+	+	+	+	+	+	+	+	+
3. Descending the edges of the top parts	+	+	+	+	+	+	+	+	+	+	+	+
4. Bending the edges of the outer parts of the top	+	+	+	+	+	+	+	+	+	+	+	+
5. Duplication of upper details with interlining, vamp - with thermoplastic toe cap	+	+	+	+	+	+	*	+	*	+	+	+
6. Tightening darts on the back	*	*	*	+	+	*	*	*	*	+	*	+
7. Spreading with glue and gluing the back of the ankle	*	*	+	+	+	*	*	*	*	+	+	*
8. Adjusting the backs of the ankle boots	*	*	+	+	+	*	*	*	*	+	+	*
9. Adjusting the leather pocket on the leather lining under the ankle boots	+	*	+	+	+	+	*	+	*	+	+	+
10. Glueing and gluing the boot knot and the boot lining knot along the edge	+	*	+	+	+	*	*	*	*	*	*	+
11. Stitching of ankle boots with trimming of leather lining	+	*	+	+	+	*	*	*	*	*	*	+

Operation											
12. Punching holes for laces	+	*	+	*	+	+	*	+	+	+	*
13. Spreading with glue and gluing the sock to the vamp	*	*	+	*	*	*	*	+	+	*	*
14. attaching the toe to the vamp	*	*	+	*	*	*	*	+	+	*	*
15. Adding leather tongue lining to textile vamp lining	+	*	+	*	+	+	*	+	+	+	*
16. Spreading with glue and gluing the vamp lining knot and the vamp knot along the edge	+	*	*	*	*	*	*	+	+	*	*
17. Stitching the edging of the vamp tongue with simultaneous trimming of the edges of the leather lining	+	+	*	*	*	*	*	+	+	+	*
18. Spreading with glue and gluing the back group to the front	+	*	*	*	*	*	*	+	+	+	*
19. Tailoring the back group to the front group while sewing the thread bartack	+	*	*	*	*	*	*	+	+	+	*
20. Spreading with glue and sticking the tabs on the vamp	*	*	+	+	+	*	*	*	*	+	*
21. Tying the reeds onto the vamp	*	*	+	+	+	*	*	*	*	+	*
22. attaching the overhead blocks to the ankle boots	*	+	+	+	*	*	*	*	*	+	*
23. Spreading with glue and gluing the vamp on the ankle boots	*	*	+	+	+	*	+	*	*	*	*

Operation											
24. Attaching the vamp to the ankle boots while attaching the tongue (without tongue)	*	*	+	*	+	+	+	+	+	*	*
25. Adding a leather lining under the ankle boots to a textile lining under the vamp	*	*	+	*	+	*	+	*	*	*	*
26. Spreading with glue and gluing the outer and inner nodes of the upper parts	*	*	+	*	+	*	+	*	*	*	+
27. Stitching the workpiece along the edge line with simultaneous trimming of the edges of the leather lining	*	+	+	*	+	+	+	*	*	+	*
28. Spreading with glue and gluing the leather lining on the vamp parts	*	*	*	+	*	*	*	*	*	*	*
29. Tightening the leather lining with the upper	*	*	*	+	*	*	*	*	*	*	*
30. Shading the details of the ankle boots on the ankle boots	*	+	*	*	*	*	*	*	*	*	*
31. Glueing the harness belt, putting on the buckles, gluing the ends of the belt	*	+	*	*	*	*	*	*	*	*	*
32. Spreading the belt with glue, gluing the Velcro fastener	*	+	*	*	*	*	*	*	*	*	*
33. Attaching the leather lining under the	*	+	*	*	*	*	*	*	*	*	*

Operation											
harness belt to the harness belt											
34. Attaching leather lining under the belt to the belt	*	*	*	*	*	*	*	+	*	*	*
35. Adjusting the harness belts on the back	*	*	*	*	*	*	*	+	*	*	*
36. Adjusting the belt on the back	*	*	*	*	*	*	*	+	*	*	*
37. Tightening the back edges of the ankle boots	*	*	*	+	+	+	+	+	*	*	*
38. Adjustment of ZNR	*	*	*	+	+	*	*	+	*	*	*
39. Adjusting the leather podklochmikov on the textile lining of the vamp	*	*	*	*	*	*	*	*	*	*	*
40. Adjusting the shtafers on the lining	*	*	*	*	*	*	*	+	*	*	*
41. Spreading glue on the upper and front edges of the ankle boots and lining, drying	*	*	*	*	*	*	*	+	*	*	*
42. Seam ankle boots with a lining under the inverted seam	*	*	*	*	*	*	*	+	*	*	*
43. Spreading with glue and gluing a pad of a soft edge, drying	*	*	*	*	*	*	*	*	*	*	*
44. Turning and banding the edge of the ankle boots	*	*	*	*	*	*	*	*	*	*	*
45. Finishing the soft edging of the ankle boots	*	*	*	*	*	*	*	*	*	*	*
46. Tightening of the ankle boots along the front edge	*	*	*	*	*	*	*	*	*	*	*

Operation											
47. Spreading gum and gum parts with glue. Drying	*	+	*	*	*	*	*	*	*	*	*
48. Gluing parts of the elastic to the elastic	*	+	*	*	*	*	*	*	*	*	*
49. Attaching the details of the elastic to the elastic	*	+	*	*	*	*	*	*	*	*	*
50. Gluing the outer boot on the elastic butt to the elastic part	*	+	*	*	*		*	*	*	*	*
51. Gluing the vamp part to the elastic but butt to the elastic part	*	+	*	*	*		*	*	*	*	*
52. Tailoring the tibia detail to the knot of the outer tibia with one stitch + trimming with openwork on both sides of the stitching	*	+	*	*	*		*	*	*	*	*
53 Sewing the workpiece onto the zipper with double stitching	*	+	*	*	*						
54. Tailoring the inner top to the zipper with the first line	*	+	*	*	*		*	*	*	*	*
55. Tailoring the inner top to the zipper with the first line	*	+	*	*	*		*	*	*	*	*
56. Tailoring the vamp on the knot of the ankle boots with a double stitching + one openwork inside	*	+	*	*	*		*	*	*	*	*
57. Bend of the upper edge of the vamp detail	*	+	*	*	*		*	*	*	*	*

58. Inversion, lining of a soft edging of ankle boots, a flap under a zipper	*	+	*	*	*	*	*	*	*	*
59. Tailoring the inner top to the zipper with the second line	*	+	*	*	*	*	*	*	*	*
60. Trimming soft edging, elastic and edging vamp details	*	+	*	*	*	*	*	*	*	*
61. Adjusting the knot of the lining under the vamp on the resulting group	*	+	*	*	*	*	*	*	*	*
62. Stitching decorative lines	*	*	+	*	*	*	*	*	*	*
63. Tucking of the lining along the back edge with a stitching seam	*	*	+	*	+	*	*	*	*	*
64. Tailoring a leather pocket on ankle boots	*	*	*	*	*	+	*	*	*	*
65. Attaching the elastic to the vamp with the 1st stitch	*	*	*	*	+	*	*	*	*	*
66. Trimming Thread	+	+	+	+	+	+	+	+	+	+
67. Shoe uppers cleaning	+	+	+	+	+	+	+	+	+	+
68. Lacing blanks	+	*	+	+	+	+	+	*	*	+

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Table 8 - Consolidated innovative technological process for assembling footwear for the assortment range men's shoes

Name of operations	Model 1 winter	Model 2 winter	Model 3 winter	Model 4 spring	Model 5 spring	Model 6 spring	Model 7 years	Model 8 years	Model 9 years	Model 10 autumn	Model 11 autumn	Model 12 autumn
1	2	3	4	5	6	7	8	9	10	11	12	13
1.Receiving blanks	+	+	+	+	+	+	+	+	+	+	+	+
2.Starting workpieces	+	+	+	+	+	+	+	+	+	+	+	+
3.Moisturizing the workpiece	+	+	+	+	+	+	+	+	+	+	+	+
4. Selection and cleaning of pads	+	+	+	+	+	+	+	+	+	+	+	+
5.Attaching the insoles (insole knots)	+	+	+	+	+	+	+	+	+	+	+	+
6.Smearing pads with talcum powder	+	+	+	+	+	+	+	+	+	+	+	+
7.Inserting backdrops made of thermoplastic materials	+	+	+	+	+	+	+	+	*	+	+	+
8.Pre-forming the heel of the blanks	+	+	+	+	+	+	+	+	*	+	+	+
9.Putting on the shoe upper on the last and installing the heel part	+	+	+	+	+	+	+	+	*	+	+	+
10.Tightening and tightening of the nose-beam part of the ZVO with hot melt glue with preliminary moistening of the nose-beam part and activation of the toe cap	+	+	+	+	+	+	+	+	*			
11.Adhesive tightening of the heel part with simultaneous	+	+	+	+	+	+	+	+	*	+	+	+

tightening of the heel part by tex	+	+	+	+	+	+	+	+	+	+	+	+	
12.Wet-heat treatment of shoes	+	+	+	+	+	+	+	+	+	+	+	+	+
13. Removing staples or tex from insoles	+	+	+	+	+	+	+	+	+	+	+	+	+
14.Trimming off excess traction edge	+	+	+	+	+	+	+	+	+	+	*	+	+
15.Rouging of the pulling edge, dust removal	+	+	+	+	+	*	+	+	+	+	+	+	+
16.First glueing of the tightening edge, drying	+	+	+	+	+	+	+	+	+	+	+	+	+
17.Second glueing of the tightening edge, drying	+	+	+	+	+	+	+	+	+	+	+	+	+
18 matching shoe soles	+	+	+	+	+	+	+	+	+	+	+	+	+
19.Treatment of low-running surfaces of soles with a solvent	+	+	+	+	+	+	+	+	+	+	+	+	+
20.First and second spreading glue on the slow surface of the soles, drying	+	+	+	+	+	+	+	+	+	+	+	+	+
21.Activation of adhesive films and gluing of soles	+	+	+	+	+	+	+	+	+	+	+	+	+
22.Cleaning the top and bottom of shoes	+	+	+	+	+	+	+	+	+	+	+	+	+
23. Removing shoes from the last	+	+	+	+	+	+	+	+	+	+	+	+	+
24. checking and cleaning the nails inside the shoes	+	+	+	+	+	+	+	+	+	+	+	+	+
25. Bonding of heels and insoles	+	+	+	+	+	+	+	+	+	+	*	+	+

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26. Cleaning and repairing shoe defects	+	+	+	+	+	+	+	+	+	+	+	+	+	+
27 retouching the upper of the shoe	+	+	+	+	+	*	+	+	+	+	+	+	+	+
28. Dressing the upper of the shoe	+	+	+	+	+	+	+	+	+	+	+	+	+	+
29.Smoothing out wrinkles on shoes	+	+	+	+	+	+	+	+	+	+	+	+	+	+
30 shoe markings	+	+	+	+	+	+	+	+	+	+	+	+	+	+
31. Packing shoes	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Table 9 - Consolidated innovative technological process for the assembly of the top blank for assortment a row of women's shoes

No.	Name of operations	Model A1	Model B2	Model IN 3	Model G4	Model D5	Model E6	Model F7	Model Z8	Model I9	Model K10	Model L11	Model M12
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Receiving and checking the cut	+	+	+	+	+	+	+	+	+	+	+	+
2	Cutting into production	+	+	+	+	+	+	+	+	+	+	+	+
3	Aligning the top parts to thickness	+	+	+	+	+	+	+	+	+	+	+	+
4	Lowering the edges of the upper parts	+	+	+	+	+	+	+	+	+	+	+	+
5	Duplication of the outer details of the upper with a midsole and vamp with toe cap	+	+	+	+	+	+	+	*	*	+	+	+
6	Inserting metal fittings into a decorative belt part	+	*	*	*	*	*	*	*	*	*	*	*
7	Bending the edges of parts	+	+	+	+	+	+	+	+	+	+	+	+
8	Sewing decorative stitching on the shaft	+	*	*	*	*	*	*	*	*	*	*	*
9	Perforation of the upper part of the outer shaft	+	*	*	*	*	*	*	*	*	*	*	*
10	Adjusting the backs on ankle boot and bootleg rear internal double row stitching	+	+										

#	Description											
11	Tightening the front shaft with the rear outer shaft	+	*	*	*	*	*	*	*	*	*	*
12	Glue the zipper tape and inner boot along the joint line. Drying	+	+	+	*	*	*	*	*	*	*	*
13	Bonding the edges of the inner zipped boot	+	+	+	*	*	*	*	*	*	*	*
14	Attaching the zipper with the 1st stitching	+	+	+	*	*	*	*	*	+	+	+
17	Re-hemming of the upper edge of the bootleg	+	+	+	*	*	*	*	*	*	*	*
18	Glue the vamp and bootleg for gathering. Drying	+	+	+	*	*	*	*	*	*	*	*
19	Applying the vamp to the bootleg	+	+	+	*	*	*	*	*	*	*	*
20	Tightening the vamp on the bootleg double-row stitching	+	+	+	*	*	*	*	*	*	*	*
21	Adjusting the shaft detail to the shaft	+	+	+	*	*	*	*	*	*	*	*
22	Adjusting the leather pocket on the fur lining	+	+	+	*	*	*	*	*	*	*	*
23	Adjusting the shtafers to inner and outer fur lining	+	+	+	*	*	*	*	*	*	*	*
24	Tapering of the fur lining at the back edge with a stitching seam	+	+	+	*	*	*	*	*	*	*	*
25	Smoothing the seam	+	+	+	*	*	*	*	*	*	*	*
26	Flap location under zipper on fur lining	+	+	+	*	*	*	*	*	*	*	*
27	Adjusting the flap under the zipper on the fur lining	+	+	+	*	*	*	*	*	*	*	*
28	Glue the outer knot details of the top and the knot of details of the fur lining along the line of the zipper for assembly. Drying	+	+	+	*	*	*	*	*	*	*	*
29	Bonding knot outside details of the top and knot of details of the fur lining along the line of the zipper	+	+	+	*	*	*	*	*	*	*	*
30	Attachment of the zipper with the 2nd line	+	+	+	*	*	*	*	*	+	+	+

№	Operation														
31	Cutting the flap under the clasp lightning	+	+	+	*	*	*	*	*	*	*	+	+	+	+
32	Tightening of the bootlegs with backs along the back edge with a stitching seam	+	+	*	*	*	*	*	*	*	*	+	*	+	-
33	Seam smoothing and gluing webbing	+	+	+	*	*	*	*	*	*	*	+	+	+	+
34	Re-hemming of the upper edge of the bootleg	+	+	+	*	*	*	*	*	*	*	*	*	*	*
35	Tapering of the fur lining along the front edge with a stitching seam	+	+	+	*	*	*	*	*	*	*	*	*	*	*
36	Smoothing the seam	+	+	+	*	*	*	*	*	*	*	*	*	*	*
37	Turning out the ZVO	+	+	+	*	*	*	*	*	*	*	+	+	+	+
38	Glue the outer knot details of the top and knot of details of the fur lining along the edge line. Drying	+	+	+	*	*	*	*	*	*	*	*	*	*	*
39	Bonding the Outer Top Assembly and Fur Lining Assembly	+	+	+	*	*	*	*	*	*	*	*	*	*	*
40	Tightening the knot of the outer parts of the top and the knot of the fur lining parts along the edging line while trimming the excess	+	+	+	*	*	*	*	*	*	*	*	*	*	*
41	Pulling, securing and trimming the ends of the threads	+	+	+	+	+	+	+	+	+	+	+	+	+	+
42	Zipper opening	+	+	+	*	*	*	*	*	*	*	*	*	+	+
43	Trimming fur on a pulling edge	+	+	+	*	*	*	*	*	*	*	*	*	*	-
44	Glue the layers of the insole for assembly. Drying	+	+	+	+	+	+	+	+	+	+	+	+	+	+
45	Bonding of insole layers	+	+	+	+	+	+	+	+	+	+	+	+	+	+
46	Trimming the insole	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	Cleaning ZVO	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48	Quality control	+	+	+	+	+	+	+	+	+	+	+	+	+	+
49	Picking up blanks	+	*	+	+	+	+	+	+	+	+	+	+	+	+
50	Adjusting the sock to the vamp	*	*	*	*	*	*	*	*	*	*	*	*	*	*
51	Attaching the vamp to the front shoulder	*	*	*	+	*	*	*	*	*	*	+	*	+	+
52	Adjusting the backs to the front and back inner sides	*	*	*	*	*	*	*	*	*	*	*	*	+	+

№	Operation											
53	Tightening of the front tibia with the rear outer tibia	*	*	*	*	*	*	*	*	*	+	+
54	Glue the zipper tape and inner boot along the line of their connection. Drying	*	*	*	*	*	*	*	*	+	+	+
55	Gluing the edges of the inner ankle boots with a zipper	*	*	*	*	*	*	*	*	+	+	+
56	Tapering of the back edges of the ankle boots with a stitching seam	*	*	*	*	*	*	*	*	*	+	+
57	Bending of the upper edge of the ankle boots	*	*	*	*	*	*	*	*	+	+	+
58	Adjusting the back of the inner to the vamp	*	*	*	+	+	+	+	*	*	*	*
59	Adjusting the back to the ankle boots	*	*	*	*	+	+	*	*	*	*	*
60	Attaching the leather pocket to the leather lining	*	*	*	*	*	-	+	+	+	+	+
61	Adjusting staples on the inner and outer lining	*	*	*	*	*	*	*	*	*	+	+
62	Tucking of the lining at the back edge with a stitching seam	*	*	*	*	*	*	*	*	*	+	+
63	Fitting through the lifting straps onto the leather lining	*	*	*	*	*	*	*	+	+	*	*
64	Stitching through the lifting straps to the back	*	*	*	*	*	*	*	+	+	*	*
65	Tightening vamp with leather lining	*	*	*	*	*	*	+	+	+	*	*
66	Glue the assembly of the outer parts of the top and the assembly of the lining along the edge, through the lifting strap under the assembly.	*	*	*	*	*	*	*	+	*	*	*
67	Bonding of the outer outer parts of the upper assembly with the lining assembly while bonding through the lifting strap	*	*	*	*	*	*	*	+	+	*	*
68	Tapering the trailing edges of the outer parts of the top	*	*	*	*	*	+	+	*	*	*	*
69	Smoothing the seam and gluing the seam with adhesive tape	*	*	*	*	*	+	+	*	*	+	+
70	Lined zipper flap location	*	*	*	*	*	*	*	*	+	+	+
71	Tightening ankle boots with backs along the back edge with a stitching seam	*	*	*	*	*	*	*	*	*	+	+

Table 10 - Consolidated innovative technological process for assembling shoes for women's assortment shoe

No.	Name of operations	Model A1	Model B2	Model IN 3	Model G4	Model D5	Model E6	Model F7	Model Z8	Model I9	Model K10	Model L11	Model M12
1	2	3	4	5	6	7	8	9	10	11	12	13	14
72	Adjusting a one-sided side bartack on the inner back	*	*	*	*	+	+	*	*	*	*	*	*
73	Folding the top edge of the knot outer parts of the top	*	*	*	*	+	+	*	*	*	*	*	*
74	Bending of the upper edge of the ankle boots	*	*	*	*	*	*	*	*	*	+	+	+
75	Tucking of the lining along the front edge with a stitching seam	*	*	*	*	*	*	*	*	*	+	+	+
76	Adjusting the leather pocket on leather vamp lining	*	*	*	*	+	+	*	*	*	*	*	*
77	Tapering the leading edges leather lining	*	*	*	*	+	+	*	*	*	*	*	*
78	Tightening the knot of the outer parts of the top and the knot of the leather lining parts along the edging line while trimming the excess material	*	*	*	*	+	+	*	*	+	+	+	+
79	Stitching the edge of the workpiece with simultaneous trimming of the edges of the leather lining	*	*	*	*	*	*	*	+	+	*	*	*
80	Finishing of the workpiece in the toe-tuft part along the lingering edge	+	+	+	+	+	+	+	+	+	+	+	+
1	Receiving blanks	+	+	+	+	+	+	+	+	+	+	+	+
2	Pads selection and cleaning	+	+	+	+	+	+	+	+	+	+	+	+
3	Attaching the insole knots	+	+	+	+	+	+	+	+	+	+	+	+
4	Spreading talcum powder	+	+	+	+	+	+	+	+	+	+	+	+
5	Insertion of backdrops made of thermoplastic materials	+	+	+	+	+	+	+	+	+	+	+	+
6	Pre-molding of the heel of the blanks	+	+	+	+	+	+	+	+	+	+	+	+
7	Putting on the shoe upper blank on the last and installing the heel part	+	+	+	+	+	+	+	+	+	+	+	+

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№	Operation										
8	Covering and tightening of the nose-beam part of the ZVO with hot melt glue with preliminary moistening of the nose-beam part and activation of the toe cap	+	+	+	+	+	+	*	+	+	+
9	Tightening the gel part of the ZVO	+	+	+	+	*	*	*	+	+	+
10	Tightening the heel of the workpieces	+	+	+	+	+	+	+	+	+	+
11	Wet-heat treatment of shoes	+	+	+	+	+	+	+	+	+	+
12	Hot air smoothing of creases on shoes	+	+	+	+	+	+	+	+	+	+
13	Removing lingering tex	+	+	+	+	+	+	+	+	+	+
14	Removing staples from insoles	+	+	+	+	+	+	+	+	+	+
15	Trimming excess traction edge	+	+	+	+	+	+	+	+	+	+
16	Ruffling the pulling edge, removing dust	+	+	+	+	+	+	+	+	+	+
17	Forgiveness of the footprint	*	+	+	+	+	+	+	+	+	+
18	First glue on the lingering edge and low-running surface of the sole, drying	+	+	+	+	+	+	+	+	+	+
19	The second spreading of glue on the lingering edge and the slow surface of the sole, drying	+	+	+	+	+	+	+	+	+	+
20	Flushing the stagnant surface of the soles	*	*	*	*	*	*	*	*	*	*
21	Activation of adhesive films and gluing of soles	+	+	+	+	+	+	+	+	+	+
22	Pre-attaching heels	*	*	*	*	*	+	+	*	*	*
23	Attaching heels	*	*	*	*	*	+	+	*	*	*
24	Sanding the edge of the sole	*	*	*	*	*	+	+	*	*	*
25	Application of varnish on the edge of leather soles and heels. Drying	*	*	*	*	*	+	+	*	*	*
26	Attaching high heels from the inside	*	*	*	*	*	+	+	*	*	*
27	Cleaning the top and bottom of shoes	+	+	+	+	+	+	+	+	+	+

28	Removing shoes from the last	+	+	+	+	+	+	+	+	+	+	+	+	+	+
29	Smoothing out wrinkles on shoes	*	*	*	*	*	*	*	+	+	+	+	*	*	*
30	Checking and cleaning nails inside shoes	+	+	+	+	+	+	+	+	+	+	+	+	+	+
31	Bonding heel pads and insoles	+	+	+	+	+	+	+	+	+	+	+	+	+	+
32	Retouching the top of the shoe	+	+	+	+	+	+	+	+	+	+	+	+	+	+
33	Finishing the upper of the shoe	+	+	+	+	+	+	+	+	+	+	+	+	+	+
34	Fastening finished shoes	+	+	*	*	*	*	*	*	+	+	+	+	+	+
35	Shoe packaging	+	+	+	+	+	+	+	+	+	+	+	+	+	+
36	Delivery of shoes to the warehouse, paperwork	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Figure 1 - Assortment of men's shoes

Model A_1 Model $Б_2$ Model B_3

Model $Γ_4$ Model $Д_5$ Model E_6

Model $Ж_7$ Model $З_8$ Model $И_9$

Model $К_{10}$ Model $Л_{11}$ Model M_{12}
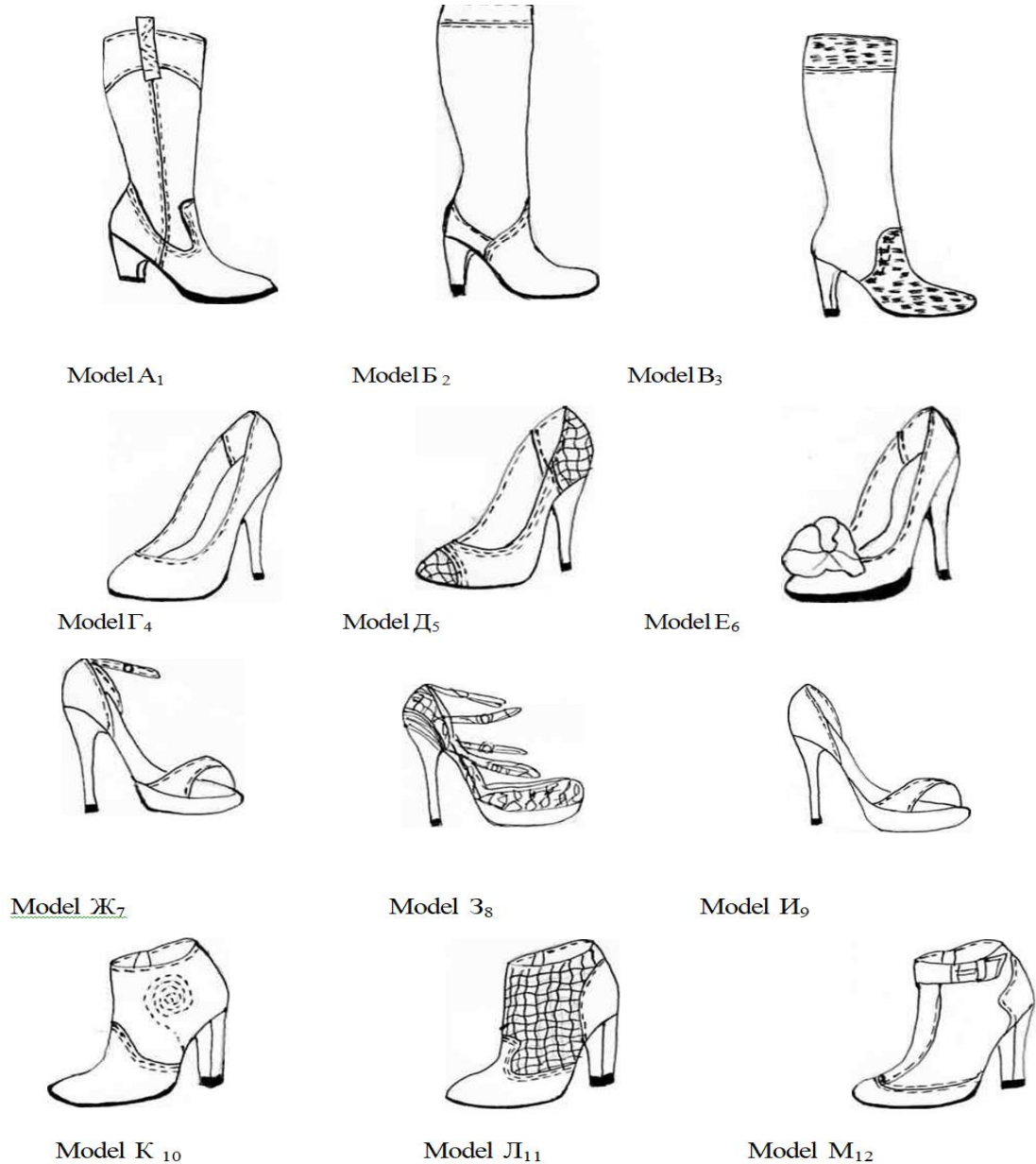
**Figure 2 - Assortment of women's shoes**

To assess the effectiveness of the production activity of a shoe company, it is necessary to analyze the annual results of the operation of the enterprise for the production of men's and women's assortment of shoes.

These calculations indicate that with 100% of the sale of men's and women's shoes in the specified period of time, not only the costs of production and sales of products are covered, but also a profit of 3,697.4 thousand rubles remains. This testifies to the efficient operation of the enterprise, as well as to the correct marketing and assortment policy. The product profitability is 14.9%.

Table 10 presents the annual results of the shoe enterprise for the production of men's and women's shoe assortment.

Most often, the company sells shoes through stores with payment after the sale, concluding contracts with the trade indicating the timing of the receipt of funds on the manufacturer's accounts.

In this case, if footwear is in demand and is fully sold, then the company receives money on time, which is also needed to pay wages, purchase working capital and other expenses to ensure the development of production.

During the year, the company produces 327,903 pairs of shoes. With 100% sales of these products, the enterprise will receive proceeds in the amount of 392,202.1 thousand rubles. However, this is not always the case.

For example, when selling autumn shoes in the amount of 80% of the production volume, the profit is reduced by 43.15% and amounts to only 1,178 thousand rubles, while the sale of footwear less than 47.4% of the production volume brings losses to the company. Due

to the lack of funds, it is necessary to reduce the volume of production, to delay the payment of wages to workers, for which at present the managers of the enterprise can be held accountable, even criminal. If such a situation arises, it is necessary to attract borrowed funds to cover costs and organize the subsequent production of products, which at the moment is associated with certain difficulties: interest on a loan has been significantly increased (up to 18%), loan repayment terms have been reduced, etc., leading to an even greater increase production costs.

Shoe enterprises should focus on both external (consumer enterprises, competition, market conditions, etc.) and internal factors such as sales volume, profitability, coverage of basic costs, etc. However, it is impossible to take into account and foresee all situations that may arise when selling shoes, i.e. some shoe models are no longer in demand at a certain stage. In this case, another, usually not advertised side of marketing should appear: if the shoes, even without taking into account the requirements of the market, have already been produced, then they must be sold. For this purpose, in order to respond to the lower prices of competitors, it is necessary to reduce too large stocks, get rid of damaged, defective shoes, eliminate leftovers, attract a large number of consumers, stimulate shoe consumption, using discounts for this. There are about twenty types of discounts, but for shoes the most common are those types of discounts that are used at various levels of the enterprise, sales organizations, trade. In addition to using discounts, an enterprise can initiate a price reduction in case of underutilization of production capacities, a reduction in market share under the pressure of competition from competing enterprises, etc. In this case, the enterprise takes care of its costs, developing measures to reduce them by improving equipment and technology, introducing new types of materials into production, and constantly improving the quality of products. And all this requires large financial costs from enterprises, but, nevertheless, promotes competitiveness of certain types of leather goods and the enterprise as a whole. In addition, the greater the number of footwear products produced, the more production costs decrease, which leads to lower prices, and most importantly, creates such conditions for the functioning of the market that would not allow other competing enterprises to enter it and would cause a positive reaction from consumers.

The developed software allows the head of the enterprise not only to monitor the flow of funds on a daily basis, but, which is especially important, to predict the replacement of one model, the demand for which has dropped to a critical volume, when funds to cover production costs associated with this model are not provided, and the transition to production of a new model, the demand for which, based on the analysis of the marketing service, seems to guarantee its viability and demand in a volume sufficient not only to cover the costs of its production, but also to obtain the necessary profit to ensure the production itself without provoking bankruptcy.

Of course, it is good when there is already the necessary supply of this very demand for a new model, namely:

— contracts with consumers for delivery with prepayment;

— a guarantee of branded stores that during the trial sale of the model aroused demand and there is a demand for them within the volumes at which a return of funds spent on their launch will be ensured and a profit will be ensured, which will ensure the enterprise obtain high TEP and stability in the formation and provision consumer of competitive and demanded products.

Thus, taking into account the software for tracking the movement of cash flow and the presence of a well-functioning marketing service that is able to provide the very process of regulating the demand for the company's products, it is always possible to make the right decision to replace one model with another, while creating the basis for obtaining high TEP and preventing the workforce from bankruptcy.

Of course, all this is just a desire, in reality, such work should be carried out daily. To do this, it is necessary to reconsider our attitude to the so-called break-even point, which, as it were, forms the conditions for the implementation of all our conclusions on the formation of competitive industries, providing labor collectives with high TEP and creating the basis for preventing their bankruptcy.

The traditional option of constructing a break-even point provides an understanding that the volume of output of a given model cannot be less than a certain number of pairs of a given model.

But with multi-assortment production, the number of pairs produced is formed by its demand, and if the demand does not ensure its implementation in the volume that provides the enterprise with a return of all funds spent on this model, in this case the manager must decide on the advisability of launching it into production. Therefore, we consider it justified when constructing a break-even point to indicate not only the volume of production of this model, which would guarantee the return of all costs for this model, but also how long it is necessary to replace it with a new one, so that the return of these funds is provided in full and with a profit.

T a b l e 1 0 - The annual results of the work of the shoe enterprise on production of men's and women's shoes

Indicators	Jan.	Feb	March	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Sales volume, pairs	26114	26114	29661	29661	29661	28168	28168	28168	25358	25358	25358	26114
Sales proceeds, thousand rubles	45032.84	45032.84	31026.82	31026.82	31026.82	24033.9	24033.9	24033.9	30640.47	30640.47	30640.47	45032.84
Unit cost, rub.	1435.54	1435.54	890.2	890.2	890.2	726.7	726.7	726.7	1024.58	1024.58	1024.58	1435.54
Full cost price, thousand rubles	37487.78	37487.78	26405.04	26405.04	26405.04	20373.34	20373.34	20373.34	25747.78	25747.78	25747.78	37487.78
Profit from sales, thousand rubles	7545.06	7545.06	4621.78	4621.78	4621.78	3660.56	3660.56	3660.56	4892.69	4892.69	4892.69	7545.06
Income tax, thousand rubles	1509	1509	924.36	924.36	924.36	732,112	732,112	732,112	978.5	978.5	978.5	1509
Net profit, thousand rubles	6036	6036	3697.4	3697.4	3697.4	2928,448	2928,448	2928,448	3914.19	3914.19	3914.19	6036
Product profitability,%	16.8	16.8	14.9	14.9	14.9	15.2	15.2	15.2	15.9	15.9	15.9	16.8

Conclusion

An assortment policy has been developed for the formation of competitive men's, women's and children's shoes, taking into account factors affecting consumer demand: compliance with the main fashion trends, economic, social and climatic characteristics of the regions of the Southern Federal District and the North Caucasus Federal District, the production of which using modern innovative technological processes, as well as to meet demand elite consumer, using manual labor create the basis for meeting the demand for footwear for the buyer of these regions.

Innovative technological processes have been developed for the production of men's, women's and children's footwear using modern technological equipment with advanced nanotechnologies, which form the basis for reducing the cost of footwear and providing it with an increase in competitiveness with the products of leading foreign companies, with the possibility of a wide-range production of footwear not only by type, but and by fastening methods, which guarantees its demand in full.

The layouts of technological equipment have been proposed, on the basis of which it is possible to form a technological process for the production of men's and children's, as well as women's shoes with an optimal capacity from the production area and the form of production organization.

Software has been developed for calculating cash flows from operating activities of shoe enterprises based on assessing the degree of implementation and dynamics of production and sales of products, determining the influence of factors on the change in the value of these indicators, identifying on-farm reserves

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and developing measures for their development, which are aimed at accelerating product turnover and reduction of losses, which guarantees enterprises to obtain stable TEP and prevents them from bankruptcy.

Software has been developed for the formation of the technological process of assembling shoes and determining the cost of producing an assortment of shoes. A computer simulation model has been implemented that describes the dynamics of the shoe assembly process. The proposed methodology and the software implemented on this basis can reduce the duration of the technological preparation of production and increase, due to the rationalization of the technological process, the specific consumer effect of shoes.

Comprehensive indicators of the effectiveness of innovative technological processes of shoe manufacturing have been calculated. Taking into account the production program, promising options for technology and equipment have been formed, the most effective has been selected; the possibilities of streamlining the flow are revealed, allowing to exclude "bottlenecks", to minimize equipment downtime, which is one of the conditions for designing innovative technological processes. The reliability of the calculations for assessing the efficiency of technological processes by methods of target programming for various technological and organizational solutions is confirmed by calculations of indicators of economic efficiency: cost, profit and profitability, etc.

The proposed technique allows to reduce the duration of technological preparation of production and reduce the time of expert work while maintaining the required depth and validity of engineering conclusions. The economic effect of the research is expressed in the intellectualization of the technologist's labor with a reduction in the time spent on developing the range of manufactured shoes and assessing the effectiveness of technological processes in comparison with a typical economic calculation of the full cost of making shoes.

The analysis of the influence of the forms of organization of production and manufacturing technology on the cost of footwear is carried out on the example of the technological process of manufacturing children's, women's and men's shoes, taking into account the shift program. Theoretical dependencies have been obtained to assess the influence of the factor "organization of production" on individual calculation items as a whole and other technical and economic indicators in order to prevent enterprises from bankruptcy.

An effective solution has been developed to manage the competitiveness of shoe industry enterprises formed into a cluster, through the use of an innovative technological process for the entire product range of the shoe cluster, equipped with universal, highly efficient and multifunctional equipment.

Recommendations have been developed to ensure regulatory documentation for the formation of quality and confirmation of the conformity of footwear within the framework of the Customs Union, which will allow preparing certificates of conformity and declarations of conformity of the Customs Union for the entire assortment range of the shoe cluster.

Proposals for the creation of a testing laboratory within the cluster were substantiated, in which it is planned to test shoes to verify their compliance with the quality and safety indicators established in regulatory documents.

The role and main tasks of the metrological service have been formulated, and its organizational structure has been developed.

Measures have been developed for testing and assessing the quality and safety of footwear.

References:

1. (2008). *Quality management of competitive and in-demand materials and products*: Monograph / Yu. Mishin [et al.]; under the General editorship of doctor of technical Sciences, Professor VT Prokhorov. (p.654). Shakhty: Publishing house of GOU VPO "yurgues".
2. (2012). *Management of production of competitive and demanded products*: \ VT Prokhorov [et al.]; under the General editorship of doctor of technical Sciences, Professor VT Prokhorov; VPO yurgues. (p.280). Novocherkassk: yurgtu (NPI).
3. (2012). *Restructuring of enterprises-as one of the most effective forms of increasing the competitiveness of enterprises in markets with unstable demand:* monograph / NM Balandyuk [et al.]; under the General editorship of doctor of technical Sciences, Professor VT Prokhorov. FGBOU VPO "South-ROS. State. UN-t of Economics and service". (p.347). Mines: Fgbou VPO "yurgues".
4. (2014). *Revolution of quality: through advertising quality or through real quality:* monograph by VT Prokhorov [et al.]; under the General editorship of doctor of technical

Sciences, prof. VT Prokhorov; Isoip (branch) DSTU. (p.384). Novocherkassk: URGU (NPI).

5. (2015). *Advertising as a tool for promoting the philosophy of quality of production of competitive products* / Kompanchenko EV [and others]; under the General editorship of doctor of technical Sciences, prof. VT Prokhorov; Institute of service and entrepreneurship (branch) Don state technical University of Shakhty: ISO and P (branch) DSTU, (p. 623).

6. (2015). *Assortment and assortment policy*: monograph / TV Prokhorov, TM Osina, EV Kononenko [and others]; under the General editorship of Dr. sci. Sciences, Professor VT Prokhorov, Institute of the service sector and entrepreneurship (Phil.) Federal state no. education. institutions of higher education. education "don state technical University. UN-t" in Shakhty, Rostov region (Isoip (branch) DSTU). (p.503). Novocherkassk: YURSPU (NPI).

7. (2017). *the Concept of import substitution of light industry products: prerequisites, tasks, innovations*: monograph / Prokhorov VT [et al.]; under the General editorship of Dr. sci.Sciences, Professor VT Prokhorov; the Institute of service sector and entrepreneurship (branch) Don state technical University. (p.334). Novocherkassk: Lik.

8. (2018). *enterprise Competitiveness and product competitiveness-the key to successful import substitution of goods in demand by consumers of the southern Federal district and the Northern Federal district*: collective monograph / Prokhorov VT [et al.]; under the General editorship of Dr. sci. Sciences, Professor VT Prokhorov; the Institute of service sector and entrepreneurship (branch) Don state technical University. (p.337). Novocherkassk: Lik.

9. (2018). *Management of real product quality and not advertising through the motivation of behavior of the leader of the collective of light industry enterprises*: monograph / OA Surovtseva [et al.]; under the General editorship of Dr. sci. Sciences, Professor VT Prokhorov; the Institute of service sector and entrepreneurship (branch) Don state technical University. (p.384). Novocherkassk: URGU (NPI).

10. (2019). *The quality management system is the basis for technical regulation for the production of import-substituting products*: monograph / VA Golovko [and others]; under the General editorship of Dr. sci. Sciences, Professor VT Prokhorov; the Institute of service sector and entrepreneurship (branch) Don state technical University. (p.326). Novocherkassk: URGU (NPI).

11. (2019). *On the possibilities of normative documentation developed within the quality management system (QMS) for digital production of defect-free import-substituting products*: monograph / AV Golovko [et al.]; under the General editorship of doctor of technical Sciences, prof. VT Prokhorov; Institute of service and entrepreneurship (branch) Don state technical University. (p.227). Novocherkassk: Lik.

12. Aleshin, B.S., et al. (2004). *Philosophy and social aspects of quality*. - Moscow: Logos.

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TRADITIONAL CLOTHES OF JIZZAKH PEOPLE

Abstract: In spite of certain availability of the national and local peculiarities, the ancient garb of all Central Asian nations living under conditions of cultural assimilation during many centuries, has one common style foundation, conditionally named in ethnography as tunic style — «tugri bichik». This style was completed in Uzbekistan in two options, both options existed during a long time which is said by wall-paintings of early mediaeval palaces and miniatures of XVth —XIXth centuries as well. Traditional Uzbek clothes, mainly, consisted of the shirt «kuylak», trousers «ishton» and dress «tun». While their sewing the fabric was measured with fingers: so, the distance between thumb and little finger in open palm was called «karich», the distance between four fingers both in open palm and closed one was called 1, 2,3 etc.

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Introduction

The clothes was usually cut with the knife tearing the fabric along the straight thread to the pieces of the necessary size, and scissors were used only in canted parts of the clothes. It was considered favourable «khosiyatii» to cut the clothes on Wednesday, Thursday as well as put it on these days. Before, almost each woman was sewing for the family.

The main results and findings

Professional tailors existed as well who were doing clothes according to the order or for sale and were called «tunchi», «paranji tikuvchi», «mursak tikuvchi», «bichikchi», «chevar»; but when sewing machine appeared in the households they started to be called «machinachi» as well. In the first option of tunic style — «tugri bichik» — the stature «buyi», «kaddi» (front and back) of the shirt «kuylak» or the dress «tun» was made from one of one and half

portion of fabric (usually the local fabric was narrow — from 24 to 51 cm) bent on shoulders. The place for collar was cut at the shoulders level. «Yaktak» or dress «tun» differed from the shirt «kuylak» with the axial cut in the front and the gores «chalgay» fixed to the cuts from lap to breast forming the dress wraparound. On the back stick-up collar narrowed to the end was closed with gore «chalgay» at the breast.

The collar was cut from the two parts and quilted with frequent stitch on the thin layer of cotton, in the result it became as the hard griff. People used to call it «yaktak yeka». To the stature hips from the armhole to the lap the side-pieces «yen» were fixed straightly along the cut. This sleeves style peculiarity on the cross thread was especially clearly seen in the clothes from the stripped fabric of the Central Asian nations. The gore «kulpak, kulfak» of three-cornered or square shape was fixed between the sleeve and side-piece and was used to prevent this place from the cut. This option of the tunic style is wide spread in all the

regions of Uzbekistan since the style of Fergana shirt «yaktak» is the basis of this style, in some places it is called «yaktak bichik» as well. The shirts «kuylak» differed with the collar shape: with horizontal vent «kiptaki yeka» and vertical vent till the breast «oldi ochik».

Female dresses «mursak», «kaltacha» and «elak» style differed from the male dress with deep and wide collar vent where the front of dinky dress with decorations was seen; and the cape «paranji» differed with the wide side-pieces and long false sleeves. The cuts «yirtmoch» were done on the hips of «mursak», «kaltachi» and «elak» like on the male dresses for the footstep increase. 73 In the second option of tunic style «tugri bichik» the stature and the upper part of the sleeves of the «tun» dress took two or more portions of the fabric bent on shoulders. The gore «kiytik» was cut off under the sleeve facing down with its sharp end, and it was fixed to the sides of the lap. The front gore «chalgay» was missing in this dress style. For the early dresses the square strip «уека» was fixed to the back near the neck, later on oblong collar «yaktak уека» approaching the breast became to be fixed to the collar vent. This second option of tunic style is typical of Bukhara clothes; male dresses «tun», «joma», female dresses «kurta» from expensive fabric were, mainly, made in this style. In some places it is calle as «rum bichik». Tashkent male dresses from expensive fabric, especially grooms' gold-cloth dresses were preferred to be made in this style, since it was considered that it suits a person very much.

The first baby's shirt «chilla kuylak» to be put on during the first forty days of the baby's life was made in this style. The cuts «yirtmoch» were done on the hips of the dresses for the movements convenience. Each region clothes differed not only with the style but with the width and length as well as the fabric colour. The clothes of people in Bukhara, Kashkadarya, Surkhandarya was made long and wide from the fabric with large ornaments and bright colour. And the clothes of the people from Tashkent and Fergana was of the medium length and width and made from the fabric of smooth colours. The clothes of the people from Samarkand was affected by Bukhara people, from one hand, and Tashkent people, from the other hand. The dresses of Khorezm people quilted with stitch and clinging were, mainly, made from the local strongly glazed fabrics «alacha» in small strips with crimson colour dominance. Female dresses in Tashkent, Fergana, Samarkand and Khorezm were very long and wide, with long and wide sleeves. And the dresses in Bukhara, Kashkadarya and Surkhandarya were more short, but with long and wide sleeves. From the second half of XIXth century theclothes of the new style is the following typical features — sectional shoulder, separate ledges and* back set-in to the cut off armhole of the sleeve.

The back on the free clothes was one-piece, and on the fitted one — from the two parts. The sleeves were stick-up «bugma уека», turn-back «kaytarma Yeka» as well as the traditional ones «yaktak уека». The new style of the clothes was called «kamzul bichik» by people. As a result, the new types of the clothes «tun», «peshmat», «kamzul», tops «nimcha» gradually turned to the traditional clothes. Especially, the dress «tun» of the new style with traditional collar «yaktak yeka»as well as cross sleeves became the favourite clothes of the old people till now. And female dress of the new style — on the yoke «kukrak burma» appeared at the beginning of XXthcentury, modifying became at present the favourite traditional dresses 74 of Uzbek ladies. The style of the dress on the yoke consisted from the upper clinging part — voka and the lower free part «etak» which was fixed to the yoke at the breast. Convenient while movements and for the hot local climate the dress on the yoke «kukrak burma» was the favourite dress not only of Uzbek ladies, but the women of the other nations inhabiting Uzbekistan as well. Trousers «poyjoma», «ishton», «lozim» is one of the components of traditional clothes, the style of which consists of two trousers «pocha» and bunt «og» between them which has rhombic shape. The trousers shape changed only with location of the sharp ends of the bunt. Till now the trousers are the necessary domestic clothes of the old people, women, girls, especially long ankle-deep ones «lozim» worn by daughters-in-law and made from expensive fabrics with bright braiding on the lower part; and they supplement the set of the nice clothes of the daughters-in-law.

The closing more than other elements or material culture reflects national character of people and refers to number of stable ethnic signs. It reflects traditions rooting in ethnic history, social relations and elements of ideology, believe, esthetic ideals. The forms of clothing were changing together with changes in life of society, its economy and policy. It was reflecting material condition of population, peoples' tastes, specific of house holding and some sides of family domestic. Culture influence of neighboring countries traces in traditional national clothing, i t 's general forms and separate elements which were creating during many centuries. The work which publishing for a first time w ill give common imagination about traditional national Uzbek clothing of end of X IX — X X centuries covering all major regions of republic. Weak study of Uzbek people's national traditional cloth and increased interest to this theme from side of artists, workers of theater, cinema, art critics, ethnic specialists, managers of national folk ensembles and wide circle of readers, insistently put the question about expedience of publishing of special work dedicated to national Uzbek cloth.

Author has fixed the aim to learn if possible hole complex of Uzbek traditional clothes reveal local peculiarities, ancient and new forms and elements

borrowed from neighboring peoples, point sources and literature. Basically this are museums funds Asia including clothes, materials, jewelry decorations and other items belonged to clothes. Also we were using the funds of bookstores and hand writing books of Oriental and A c knowledge Institutes were ancient handwritings saturated with miniatures, paintings and pictures. At preparing the work we familiarized with articles written by O.A. Sukhareva1, N.P. Lobachiova2, M.V. Gorelic3, M.A. Bijanova4 published in historical-ethnography collection «M iddle Asia Peoples Costume» (M .: Science, 1979). Article written by academic of Academy of Science of Republic of Uzbekistan A.Pugachencova5 «Yashmak» and published in magazine «Soviet Ethnography» attracts an attention.

Sufficiently complete imagination of clothes of last centuries, their forms, local peculiarities and material gives opened by archeologists monuments of wall paintings of Middle Asia and also sculpture, small plastics, torevtic, fabrics and in some cases ethnographic materials (Afrasiab, Penjikent, Balaliktepa, Khalchayan and others) which at complex study allows to reproduce real costume of appropriate epoch. These monuments of Tokharistan and Sogda in the period of early middle ages V of VIII centuries (generally before Arab invasion) reflected the life of top layer, basically aristocracy, rich traders and also musicians, dancers and their servants. Studying the monuments is possible to trace social and sex differences in costumes. At studying the costumes on base of decorative materials of monumental wall art6, sculpture7, coroplastic8 and in combination of all types of monuments archeologists9, art critics and ethnographers made the conclusion: the evolution of Middle Asia cloth is directly connected with ethnic, social-politic history of not only Middle but and Central Asia. Comparative analysis of Tokharistan and Sogda costumes evidence about common historical ways of development and fortunes of Middle Asia peoples, about active inter-influence of their cultures during millenniums. G.M. Maydinova studying wall paintings as a source for theory of costume in combination with other types of material and spirit culture (sculpture, terracotta, torevtic, writing sources and some ethnographic materials) asserted that: there are reflected in graphic materials of early middle ages the stable types of cloth of different districts of Tokharistan and Sogda adopted to local climate and household since ancient tim es10.

They are very interesting conclusions made by ethnographer N.P. Lobachiova studied wall paintings on monuments of early middle-age epoch of Middle Asia11. Paintings of VIth —VIIIthcenturies allows not only imagine the shape of costume of that time but and determine in some cases the cut of cloth, gives facility for judgment of peculiarities of the costume belonged to different local and ethnic groups of population. Further the author underlines that principle of cloth cut was common: all types of shoulder cloth had tunic style might be some times kimono-shaped cut. It very often had side cuts, horizontal collar. These allow seeing in modern cloth of people of Uzbekistan features rooting in deep historical tradition. N.P. Lobachiova underlines that these paintings combined with ethnographic materials where concentrated invaluable monuments of material culture of the peoples of Middle 50 saying about fact that developing the forms of cloth at all peoples of the region passed about same, which explains by common way of history the people populating this region, reflected on forming of their culture.

Conclusion

There are in cloth appeared the results of continual communication of these peoples between each other. Generally the cut was forming by regions but not by peoples. N.P. Lobachiova analyzed the elements forming archaic traditions in history of cloth of peoples of Middle Asia, as unity of forms of man and woman's costume saved from deep antiquity. For us it's only left to join to scientific conclusions of N.P. Lobachiova scrupulously studied wall paintings of monuments of Middle Asia from point of view of specialistethnographer. Muslim miniature of XVth — XIXthcenturies of Gerat and Bukhara schools is valuable source at studying the cloth. Art of Gerat School is the basic at studying of Middle Asia costumes by miniatures of XV —XVI centuries. In that time Gerat was center of culture and legislator of style of all Middle East. Tradition of the costume as it was fixed on miniatures was becoming the style for Bukhara, Samarkand, Tashkent, Andejan and other cities.

References:

1. Karamatov, H. (2008). *History of religious beliefs in Uzbekistan*. Tashkent.
2. Ashirov, A. (2007). *Ancient beliefs and ceremonies of the Uzbek people*. Tashkent: "Publishing House of the National Library of Uzbekistan named after Alisher Navoi".

Clarivate Analytics *indexed*

3. Toshboev, F. (2018). On the pre-Islamic religious beliefs of the Ustrushona herdsmen. *Lessons of Imam Bukhari*, Issue 2 of 2018.

4. Alibekov, L.A., & Nishanov, C.A. (1978). *Natural conditions and resources of Djizak region*. Tashkent: "Uzbekistan".

5. Jumabekov, A., & Aliqulov, R. (1999). *The concept of Umay mother in the ancient Turkic peoples*. Samarkand.

6. Aqchayev, F.SH. (2020). *Shrines of Jizzakh oasis*. Dissertation for PhD. – Tashkent.

7. Arifxonova, Z.KH. (2002). *Mahallas of Tashkent: traditionality and modernity* – Tashkent. Yangiasravlodi.

8. Mardievna, B. M., Mukhamadjanovna, J. S., Nematovich, N. O., & Azamovich, T. V. (2020). The importance of modern methods and technologies in learning English. *Journal of critical reviews*, *7*(6), 143-148.

9. Ozodbek, N., Tolipov, F., & Yunusova, X. (2019). Historical and ethnographic features of the Uzbek Kurash. *International Journal of Recent Technology and Engineering*, *8*(2 Special Issue 3), 1614-1616.

10. Jumanazarova, D., & Davlatova, H. (2021). Customs Of Population In Jizzakh Oasis Associated With Chilla. *The American Journal of Interdisciplinary Innovations and Research*, *3*(04), 63-66.

11. Khakima, D. (2021). Customs Related To Tadjiks' Wedding In Jizzakh Oasis. *The American Journal of Political Science Law and Criminology*, *3*(04), 38-41.

12. Davlatova, K., & Nematov, O. (2021). Tajiks of jizzakh oasis: traditional way of life, customs and traditions and rituals. *Journal of Contemporary Issues in Business and Government*, *27*(3), 1324-1329.

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SCIENCE OF INNER STATE IN NAVOI'S WORKS (NAVOIY ASARLARIDA HOL (ICHKI HOLAT) ILMI. INTERNAL SCIENCE IN NAVOI'S WORKS (NAVOIY ASARLARIDA DINIY/TASAVVUF ILMI)

Abstract: *The article gives a perfect description of external (world) and internal (religious) sciences. Their origin and features are described in detail. Navoi's attitude to the external and internal sciences has been studied in detail. It also discusses the external and internal sciences and the positive or negative states associated with them, the colorful experiences of the soul, and the artistic expression in poetic and prose works.*

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Introduction

It is known that many verses and hadiths about science in the Qur'an and hadiths have always encouraged poets and writers in the Islamic world to acquire knowledge and propagate it. It is also clear from the hadith, "Scholars are the successors of the prophets," that although there are people of different ranks and positions in the world, it is not in vain that only scholars are heirs.

Our compatriot Hakim at-Termizi (820-932) wrote in his book "Kitab al-huquq" ("Rights in us") that "Allah, first of all, created knowledge. From knowledge, however, he created wisdom. And he created justice and truth out of wisdom". He has such works as "Kitab bayan al-ilm (Description of knowledge)", "Ilm al-awliyo (Knowledge of the wise)", "Al-ilm (Knowledge)", "Kitab al-huquq", and even "Kitab al-hikma ilm al-botin", in which the science related to our subject it should be noted that he paid attention to both the external and internal aspects.

Alisher Navoi, in accordance with the divine call, in his life and works perfectly illuminated and showed the features of science and the qualities of the people of science in all respects. Historian Khandamir writes in his book "Makorim ul-ahloq" that Navoi "spent most of his time from childhood to the end of his life in the pursuit of knowledge and perfection", "in his youth and adolescence" he was busy with "reading famous books" of his time, whether on a trip or in the city he was "in service to use Fasihiddin Muhammad Nizami's knowledge"[3:28-32].

In "Vaqfiya", Navoi states that he paid salaries to the students and teachers, built the "Dor ul-huffoz" for the reciters, the "Ixlosiya" madrasah for teaching science, and dozens of "Xalosiya" for the Sufis. Historians such as Khandamir testify that Navoi always supported his contemporary scholars such as Jamoliddin Atoullah, Mir Kamoliddin Hussein, Mawlana Mu'iniddin Voiz, Hussein Voiz Kashifi with material and spirtual needs. If we look at the works of the great poet, we come across dozens of wise verses, reprimands and exhortations about science. The first steps of the protagonists of "Khamsa" such as Farhod and Iskandar on the path to perfection also began with the acquisition of knowledge.

The fields of science in Navoi's works can be conditionally divided into several groups:

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1. **Secular and life sciences:** Mathematics, geometry, music, astronomy, wisdom, astrology, history, dictionary, medicine, literature, etc.

2. **Shari'ah- religious sciences:** Fiqh, hadith, tafsir (Learns about the Qur'an verses) fields. Navoi says about this in the epic "Farhod and Shirin":

Bu din ilmiki xomam qildi tahrir,
Erur fiqhu hadisu so'ngra tafsir.

(Defination: they are the sciences of Fiqh, Hadith and Tafsir)

3. **Laduni science**. According to "Ghiyas ul-Lug'ot", Laduni knowledge is the knowledge that is given by Allah without a teacher and without hard work. Laduni knowledge includes revelation, inspiration and intellect. Revelation is given to the prophets, inspiration is given to the saints, and intellect is given to all people[7:209]. Abu Nasr al-Farabi, in his "Ilmlarning tasnifi (Classification of Sciences)", speaks of a laduni revelation: It is necessary for Allah to convey the necessary messages to His prophets through revelation. If the information conveyed by revelation were in the minds of the people, then people would believe in their own minds and would have no need for prophets or revelation. However, other people have not been given the ability (to know the unseen). Therefore, it is natural that people do not understand what religions say[1:60]. According to mystical dictionaries, inspiration is the meaning or truth that appears in the heart through divine grace. Discovery is to see ,with the eye of the heart, truths that cannot be perceived through the senses and intellect; to see the unseen features and real things behind the scenes, to feel them, to be aware of their secrets. That is why the wise are called the people of the heart or the masters of discovery. There are concepts in this regard: theoretical discovery, enlightenment discovery, divine discovery, spiritual discovery, priest discovery, discovery of singleness, muhayyal(the sea on the east side), concern discovery, zamoyir (to consider oneself as someone) discovery and soul being discovery.

Also, the internal knowledge means the meanings and benefits that have reached to the heart from Allah without the will of the person. *"Ilmi qol"* is the Shari'ah, *"Ilmi hol"* is the tariqat (teachings). In mysticism, because the state of pious is important, this doctrine is sometimes referred to as the state of internal science. God-fearing people are " internal knowedge possessors." Therefore, the case is also used in the sense of wise person.

4. **Internal science.** Abu Hurayra, one of the famous Companions, said: "I received two bags of knowledge from the Messenger of Allah (s.a.w.). I told you one of these. If I had told you another one, you would have cut off my neck". It is clear from these words that there is a science that cannot be told and must be kept a secret, and it is one of the inner sciences as well as a specific secret ...

Navoi divided the science taught in madrassas into "qol" - the external science, and the science of the sect tariqat into - "hol", namely the inner science. Because, when the poet reported about some sheikhs in his commentary "Nasoyim ul-muhabbat", he also said, "External science is connected with internal science", " he is good at bases and knowledge of external science", "was a scholar with outward and inward knowledge", "also knows about external science". In fact, these sciences are interconnected and interdependent. Therefore, in mystical sources, the Shari'ah is medicine, the tariqat sect is to consume it, and the truth is the prevention of disease, the Shari'ah is the skin, the tariqat sect is consume it, the truth is the bones, and the enlightenment is the marrow. Sharia is a glass, truth is the wine in it. Various definitions have been given, such as that if you break the glass, you will be left without wine[8:184-185].

In the works of Sufis, they emphasize that the Qur'an and the hadiths have both outer meanings and inner meanings. We also frequently encounter in their works such expressions as the external world and the internal world, the external science and the internal science, the external scholar and the internal scholar, the external residence and the internal residence, the external ablution and the internal ablution, the external blessings and the internal blessings. It is also clear from this that everything has an inner and an outer side, and that they have separate laws and qualities.

According to the dictionaries of mysticism, the external knowledge that protects the inner knowledge from corruption is as a *"qishr"* (skin, shell), and the inner knowledge that preserves this knowledge is as a *"lub"* (base, core, essence). The outward and the inward are not two separate things, one is the outer side (shell) of the thing, and the other is the inner side (the core). So it is the same with relationships of the sects Shari'ah *(religion),* Tariqat *(teaching)* and Haqiqat *(truth).* The Shari'ah is the outside of the sect Tariqat, and the sect Tariqat is inside of Shari'ah. Tariqat is the outside of the sect Haqiqat*(truth),* and the truth is inside it. That is why Haqiqat (the truth) is called lubbul lub ("the inside of the inside, the core of the core").

Since the external sciences are the basis of the internal sciences, the science of the madrasah, the requirements of the Shari'ah, have always been primary in the eyes of true Sufis. Only the talented people who followed it, who showed generosity and zeal in the path of mysticism, had inner knowledge, discoveries and prophecies. The knowledge and understanding of some Sufis in this way has been diverted from ordinary people, even from the minds and consciousness of the madrasah teachers. According to Navoi, Sheikh Zunnuni Misri (d. 860) said: "I did three times and brought three sciences (that is, I created three different sciences). On a previous trip, I brought a science that was accepted by

both native and common people. On the second journey, I brought such a knowledge that the peculiar people accepted and the commoners did not accept. And on the third journey I brought such a knowledge that neither the peculiar people nor the common people accepted it. As a result, "I was a fugitive, persecuted, and left alone". Shaykh al-Islam (namely Shaykh 'Abdullah al-Ansari) interprets the three sciences as follows: "The first was the science of repentance, both peculiar and common people accepted it. The second was a science of risk and treatment and love, which was accepted by the peculiarities and not accepted by the commoners. Thirdly, the science of truth was beyond the reach of the people. The people did not understand them and began to deny Zunnu Misri"[2:104-105].

Just as the external sciences or certain circumstances have affected the inner, so the actions internal science have also affected the external. As Shaykh al-Harith ibn al-Asad al-Muhasibi (d. 857) said: "Whoever corrects his heart with sincerity and willing, Allaah will beautify his appearance by following belief and the Sunnah".

Navoi Abdukholik Gijduvani gives an example of the inner feeling, the observation of the governorship. During the days of Ashura (tenth of Muharram (a month)), when Hazrat Abdukhaliq Gijduvani was speaking to the people of a large congregation about enlightenment, a young man, with a prayer mat on his shoulder, came in and sat on the edge, looking like a *Zohid* (a man in mystysicism). When Hazrat Hoja looked at him, he said: What is the secret (true meaning) of the hadith?, "Fear the wisdom of the believer! Because he looks with the light of Great and Mighty Allah". Gijduvani replied, "The secret of this hadith is that you should cut the "*zunnor*" (a belt) under your dress and make believe". He immediately cuts off his belt and makes believe (here, believes in God). Hazrat Hoja said to the people around him, "O my Companions, let us, like this young man who cut off his belt, cut off our pride, ambition, hypocrisy and believe. May our sins be forgiven as his have been forgiven". A wonderful situation arises after this incident. People repent by putting their head at the Hazrat's feet[2:301].

One of the greatest caliphs of Bahauddin Naqshband, Hoja Muhammad Porso, says in his "Risalai Qudsiya": "When a learner reaches puberty, there is no difference between what says his soul and his tongue. That is, his deeds do not interfere with his inner deeds, and his inner deeds do not hinder his outward deeds. He is allowed to call the people to the path of *Haq subhanahu wa ta'ala*(Way of Allah)[6:88].

It is known that as a result of the development of internal science, inner strength and state have been achieved. For this reason, when they say **inner knowledge**, Sufis understood the special duties that given to a *murid* (a learner in mystysicism) by the murshid (a teacher in mystysicism), while they understood the light, discovery and unseen mysteries that resulted from these duties when they said **internal science**. As a result of the combination of external and internal sciences, Sufis have been blessed by Allah. According to Navoi in his preface to "Nasayim ul-Muhabbat", this prophecy took many forms: to be aware of something hidden, to cover long distances in one pass, to appear in several places at the same time, to walk on water, not to burn in fire, to fly in the air, and so on.

It is generally said that when it comes to saints and perfect human beings, they have outward and inward qualities. In Navoi's works, when talking about people with outward and inward knowledge, such as Sufis, Arifs, Lover, Dervishes, and erans (strong men), he sometimes draws attention to their distinctive qualities: For example, in chapter "recalling dervishs' " in "Mahbub ul-qulub", he talks about some qualities of "dervish" and " eran". In other words, they have attained the status of consent and poverty, have a pure heart, they are content with destiny, have endured hardships, have "established the method of sincerity", and have forgotten "everything except Allah" due to their high devotion. If the inside fits the outside, the bottom is in proportion to the outside. While the people of appearance (who love one's outside image) are the claimants, the *erans*, on the other hand, hide their situation and "destroy outward wishes " and correct the "foundation of the interior". They endure for hardships, "refrain from eating and drinking", "wishing for Allah's approval" tolerate for people's claims. " They surrender, find peace in lonelyness. To be polite is peculiar to them, but not for an enemy and frien. Through this they can be a dervish" [2:82].

Navai in his work "Nasayim ul-Muhabbat" states that Sheikh Ali bin Abdulhamid al-Ghazari's father Abdulla Ansari was the priest of Herat and one of the *abdols* (prayer, follower). Being "*abdol*" is also a kind of status like *"qutb"* and *"avtod"* in sainthood. As with every saint, they will have outward and inward qualities. 4 Appearant features of Abdols: *1. They talk less and think more; 2. They get up early, sleep less, and spend most of the night in prayer; 3. They eat little and endure hunger; 4. They are the people of lonelyness, far from the people, close to Allah.*

At the same time, each of these four qualities have external and internal states. These are their four inner qualities: 1. They are the people of Tajarrud(disconnect, alienation, loneliness), they are completely dependent on God; 2. They are the people of Tafrid, those who have attained the secret of unity; 3. They are the people who have found the Truth in God; 4. They are the people of Tawheed (knowing Allah's qualities,names), those who know the secret of Tawheed.

It is the nature of the abdols to leave the body and the image in the place where they are, to go on a journey, to appear in different places at the same time. Their place is above the heart of prophet Ibrahim. One of the Abdols is the Imam(leader of religious people) of these 7 people. They all obey him and obey his command. He is the leader of 7 people. There are those who say that Abdol is 47 people. This 47-member team of saints is called *"Akhyor"*. As in the Abdol group, each group of prayers will have a leader within them. At the same time, the imam is the leader of his group[9:140-141].

Imam Suhrawardi, on the subject of mystical etiquette, writes in "Awarif ul-Maorif": "Sufis discuss two kinds of manners, one external and the other internal. Shari'ah etiquette is the basis of mysticism. Inner etiquette is about thinking and feellings of soul".

Indeed, the Sufis call the feelings, behaviors, and actions, such as love and hate, sincerity, blessings, and misfortune, which appear in the heart and are not seen with eyes, the deeds of the heart, and deeds of the soul. The rule of the inner world is also called the rule of truth. The idea of mysticism is to analyze these feelings in the heart and determine their judgments. Therefore, mysticism can be described as "a science that studies the inner deeds and their rulings." Those who know this science are called internal scientist, people of inner knowledge and heart doctors.

The heart is the gaze of Truth(Allah). It is a mystery, a place of sciences. Navoi warns that divine grace is in the heart and that one should not say anything rude in front of the people of the heart. Because such indecency hinders interest, leaves them beyond of the attantion of the great.

Fayzi qudsiy tilasang ko'nglungga bo'lg'ay zohir,

Ahli botin qoshida so'z dema aslo gustox.

(if you want a mercy it will appear in your soul, and do not say anything in front of people of inner science)

Apparently, the food is sometimes delicious and sometimes tasteless to human nature. But the nourishment of the inner soul, that is, the spiritual nourishment of the heart, the discoveries and mysteries, always bring happiness. Our great poet advocates the pursuit of spiritual education, the acquisition of spiritual nourishment:

Quti botin istakim, zohir g'izosi birla tab'

Bir zamon gar topsa lazzat, bir zamon ko'rmas laziz.

(Wish for internal knowledge, the same with the taste of the food

Sometimes delicious and sometimes you do not taste)

But in other places, Navoi advises to clean the appearance and the interior, to achieve a balanced purity. He emphasizes the impurity on the outside with tears, the washing of the filth (pessimism, anxiety, arrogance, etc.) on the inside with repentance:

Arish sirishq bila zohiringda esa chirq,

Yuv tavba suyi bila bo'lsa botining aro shux.

(Clean your outside dirty with your tears, and your inside with repentance)

According to Navoi, the outward appearance of a person should be simple, poor, not arrogant. Otherwise, he will not be able to do good deeds that are worthy of his nature, that is, in the form of saints:

Avom zohiridek qilmag'ang'a zohirini,

Muyassar o'lmadi botin ishi nechukki xavos.

(If you do not keep appearance pure, you cannot access of inner world knowledge)

When Abdukhaliq Gijduvani exhorted his son in this regard, he said, "Do not make your appearance ugly, unless your heart will be ruined"[5:83], Sheikh Khudoydod Wali also said: "...if tears are cold, they are the tears of painless people. Tears of people in pain according to sign "Appearance is the sign of the heart" are from the warmth of the heart. And the lover is always involuntary and carelessly in pain ... " [4: 204].

The inner world, the purity of the soul, has always been primary in the eyes of the Sufis. Because it is a state free from hypocrisy and self-indulgence. When Hazrat Bahauddin Naqshband was asked about the basis of his sect: At the heart of his answer, "At the conference, the people know the secret, the outward face knows the truth, and the inner side knows the truth," it is clear that the inner secret and knowledge is the primary state, and that poverty and humility lead to a perfection, not arrogance and selfishness.

As long as society exists, man lives in conflicting events and concepts. In mysticism, we encounter philosophical, figurative, and true meanings of words such as good and evil, black and white, light and darkness, earth and sky, hell and heaven, believer and disbeliever, false and true. It is this aspect that has helped to express the Sufi content more deeply in poetry.

Navoi does not want people to see the pain and anguish in his heart in one verse. Because they are interested in appearance, not in meaning. They are only to blame when they do not feel the original purpose. The inner state is understood only by the inner beings. That is why he wants them not to tear his breast in front of Farhad and Mejnun (main heros in his great work Khamsa), to hide the heat and the stain of love in him:

Yormangiz Frahodu Majnun allida ko'ksumnikim,

Botinimning dardu dog'in ahli zohir ko'rmasun.

(Do not tear my breast in front of Farhad and Mejnun, so that people cannot see my inner pain)

Navoi also warned of good things in appearance and in the heart from things that would ruin them. He says that one is destroyed by anxiety (all kinds of doubts, temptations), and the other by greed (various goals, desires and wishes).

Botinu zohirning ahvolini ko'rkim qilmish

Zoyi' ul birni xavotir, bu birisin ag'roz.

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(Your outside and inside world could be ruined by anxiety and greed)

In short, in Navoi's works, the external and internal sciences and their positive or negative states, the colorful experiences of the soul are expressed in poetry and prose in the form of metaphors and truths. In order to comprehend the essence of the meanings implied by our great poet, we must understand and comprehend them correctly.

References:

1. (2016). *Abu Nasr Forobiy. Ilmlar tasnifi*. (Ixso al-ulum). Toshkent.
2. (2011). *Alisher Navoiy. TAT*. 10-jildlik. 10-j. Toshkent.
3. (2015). *Gʻiyosiddin Xondamir. Makorim ul-axloq*. Toshkent.
4. (2017). *Ulugʻ avliyo. Shayx Xudoydad Vali*. Toshkent.
5. (2018). *Xoja Abduxoliq Gʻijduvoniy. Maqomoti Yusuf Hamadoniy. Vasiyatnoma*. – Toshkent.
6. (2020). *Xoja Muhammad Porso. Risolai qudsiya*. Toshkent.
7. (1988). *Gʻiyos l-lugʻot*. 3 jildli. 2- j. Dushanbe.
8. (2020). *Sayfiddin Sayfulloh. Xojagon-naqshbandiya (asoslar va rashhalar)*. Toshkent.
9. (2019). *Sayfiddin Sayfulloh. Tasavvuf va naqshbandiylik. (manbalar va hikmatlar)* Toshkent.

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ISSUES OF ACTIVE DEVELOPMENT OF THE DIGITAL ECONOMY

Abstract: *This article examines the development of the digital economy in our country. In particular, it analyzes the positive and negative aspects of digital transformation, issues of improving the e-government system.*
Key words: *digital economy, digitalization, technological digital environment, digital transformation, qualified personnel.*
Language: *Russian*

ВОПРОСЫ АКТИВНОГО РАЗВИТИЯ ЦИФРОВОЙ ЭКОНОМИКИ

Аннотация: *В данной статье рассматривается развитие цифровой экономики в нашей стране. В частности, анализируются положительные и отрицательные аспекты цифровой трансформации, вопросы совершенствования системы электронного правительства.*
Ключевые слова: *цифровая экономика, цифровизация, технологическая цифровая среда, цифровая трансформация, квалифицированный персонал.*

Введение

В сегодняшней конкурентной среде необходимость снижения стоимости экономических продуктов и услуг между разными странами и производителями, развитие инновационных технологий привело к быстрому развитию Интернета и мобильной связи, что, в свою очередь, формировал путь к цифровой экономике.

По мнению А. Урманцевой и В. Митина, термин «цифровая экономика» впервые применился на практике в 1995 году со стороны Н.Негропонте, ученый-компьютерщик из Массачусетского технологического института [8].

Концепция «цифровой экономики» получила международное признание в 2016 году после публикации отчета Всемирного банка «О цифровых дивидендах». Ранее для определения экономических отношений, возникающих в результате использования новых информационных и коммуникационных технологий (ИКТ), использовались такие термины, как «информационная экономика» и «электронная экономика».

По мнению экспертов Boston Consulting Group (BCG), для некоторых стран эта цифровая экосистема является логическим продолжением эволюционного развития и возможностью в полной мере реализовать «креативную экономику», «новую экономику», где проходит граница между онлайн и офлайн остается условным; уровень вовлеченности государства, бизнеса и граждан достигает 100%. Это событие - ближайшее будущее для ведущих стран. Для развивающихся стран цифровизация - это возможность сохранить реальную конкурентоспособность и стабильность в долгосрочной перспективе» [9].

Многие зарубежные исследователи сопоставляют «цифровую экономику» с такими понятиями, как «информационная экономика» и «креативная экономика». Эти термины часто используются как синонимы для описания процессов, связанных с формированием

глобальной информационной сети в постиндустриальной экономике, повсеместным распространением персональных компьютеров, разработкой и постоянным совершенствованием программного обеспечения, продвижением цифровых технологий, производством нематериальных продуктов и информационных услуг и коммуникационные компании.

Глобальное информационное пространство состоит из следующих основных компонентов:

— информационные ресурсы, содержащие информацию, данные и знания, опубликованные в соответствующих СМИ;

— организационные структуры, обеспечивающие сбор, обработку, хранение, распространение, поиск и передачу данных;

— инструменты сетевой коммуникации, которые предоставляют частным лицам и организациям свободный доступ к любым информационным ресурсам.

Информация, интернет и новая экономика отражают только общее понятие - отдельные процессы, которые привели к цифровой экономике. Цифровая экономика возникла как обобщающее понятие, которое включает в себя ряд общих, специфических характеристик, характеризующих точность качества. Цифровая экономика - это не только новая цифровая технология, но и существенное изменение нового облика классических экономических законов, основанных на традиционных правилах ведения бизнеса.

Появление и распространение глобальных коммуникационных сетей, персональных компьютеров, электронных продуктов и услуг в сочетании с термином «цифровые технологии» в цифровой экономике резко изменит содержание и взаимозависимость следующих понятий: материальное и нематериальное, местоположение и расстояние, время и пространство, стоимость и полезность, качество и количество, потребительский спрос и конкуренция, брокерские операции и логистика, человеческий капитал и деловая этика, новые отношения между производителями и потребителями, технологии маркетинга и поставок и многое другое.

В 2001 году Томас Мезенбург определил три основных компонента цифровой экономики, которые можно статистически оценить и измерить [7]:

• вспомогательная инфраструктура (оборудование и программное обеспечение, телекоммуникации, сети и т. Д.);

• электронный бизнес (ведение бизнеса и любых других бизнес-процессов через компьютерные сети);

• электронная коммерция (распространение товаров через Интернет).

С технологической точки зрения цифровая экономика является результатом сочетания достижений в развитии нескольких сфер деятельности, в том числе: создание киберфизических и кибербиологических систем, новых материалов, новых средств производства, информационных технологий. технологии, возобновляемые источники энергии и многое другое. Переход к цифровой экономике характеризуется технологическими взрывами, которые понимаются как сочетание технологий, которые, с одной стороны, создают новые сферы деятельности, а с другой - создают новые продукты и услуги, которые разрушают или радикально меняют существующие отрасли. экономики.

Цифровая экономика - это новая современная форма управления, в которой основным фактором производства и управления является большой набор данных в цифровой форме и процесс их обработки. Практическое применение полученных результатов позволит достичь гораздо большей эффективности, чем традиционные формы управления. Примеры включают различные автоматизированные производственные процессы, 3D-технологии, облачные технологии, удаленные медицинские услуги, производство и доставку продуктов с использованием интеллектуальных технологий, а также хранение и продажу различных товаров.

Исходя из вышеизложенного, следует отметить, что цифровая экономика - это система социальных, экономических и технологических отношений между государством, бизнес-сообществом и гражданами в глобальном информационном пространстве. В целях повышения эффективности социально-экономических процессов в этой системе процессы производства и продвижения товаров и услуг потребителям, ведущие к постоянным инновационным изменениям в методах и технологиях управления, осуществляются за счет широкого использования цифровых сетей. технологии.

Условиями успешной реализации поставленных задач при переходе к цифровой экономике является комплексная подготовка к использованию данных методов, прежде всего за счет предоставления качественной информации, основанной на статистических, учетных и аналитических данных. В связи с этим важно активно использовать положительные результаты, учитывать позиции, с которыми сталкиваются практики, и разрабатывать соответствующие методы их преодоления.

При этом, учитывая готовность различных хозяйствующих субъектов к его использованию, особое внимание следует уделить гармонизации использования методов цифровой экономики в

производственных и управленческих процессах, синхронизации мер по продвижению методов цифровой экономики в рамках полного цикла производства. и воспроизводство проектов. В связи с этим необходимо учитывать пропорциональность технической поддержки всех участников процессов в информационно-коммуникационных сетях.

Цифровая экономика переживает бум во всех развивающихся странах мира. Использование его различных инструментов способствует расширению экономических связей между странами, позволяет им полностью соответствовать требованиям устойчивого развития, включая не только экономические, но и глобализацию экологических программ, рациональное использование природных ресурсов и занятость в качестве социальная стабильность.

Этот подход включает важную задачу по обеспечению единого подхода и стандартизации ключевых терминов, используемых в организации и управлении экономикой. В связи с этим в контексте развития цифровой экономики важна стандартизация терминологии, используемой в управлении экономикой. Примерами этого являются использование международных стандартов организации производства (ISO), международных стандартов финансовой отчетности и бухгалтерского учета (MSFO), международных стандартов аудита и контроля (MSA, MSFK) в большинстве стран мира.

Однако в условиях цифровой экономики этот аспект имеет особое значение и охватывает все ее элементы: стандартизацию систем данных, их анализ, методы статистической обработки, выводы, предложения по совершенствованию развития, формы и планы прогнозов [3].

Технологическая цифровая среда - это «аквариум», который позволяет юридическим и физическим лицам вступать в совершенно новый диалог для совместной деятельности. Информационные технологии позволяют компаниям освоить совершенно новый, более динамичный темп работы и разнообразить формы услуг и продуктов. Электронная коммерция, интернет-банкинг и другие подобные современные тенденции развиваются день ото дня. В результате автоматизированные сетевые услуги (например, качественный веб-сайт или мобильное приложение) заменяют бизнес-посредников в большинстве отраслей для увеличения доходов.

В результате предприятия могут значительно снизить цены, установленные на услуги, а в макроэкономическом направлении могут увеличиться показатели индивидуального производства и незанятости. Такие области, как краудфандинг и краудсорсинг, теперь также

включены в список новых экономических технологий [6].

Условиями успешной реализации поставленных задач при переходе к цифровой экономике является комплексная подготовка к использованию данных методов, прежде всего за счет предоставления качественной информации, основанной на статистических, учетных и аналитических данных. В связи с этим важно активно использовать положительные результаты, учитывать позиции, с которыми сталкиваются практики, и разрабатывать соответствующие методы их преодоления.

Процесс формирования цифровой экономики отслеживается как на глобальном, так и на национальном уровне. Есть разные способы оценить его масштаб. Самый простой и распространенный метод - оценить долю цифровой экономики в ВВП страны.

В частности, аналогичные расчеты проводила компания BCG. По его словам, с 2010 по 2016 год доля цифровой экономики в ВВП развитых стран увеличилась с 4,3% до 5,5%, а в ВВП развивающихся стран - с 3,6% до 4,9%. BIG 20 за пять лет этот показатель вырос с 4,1% до 5,3%. Первое место по доле цифровой экономики в ВВП занимает Великобритания - 12,4% [2].

Эксперты говорят, что цифровая трансформация принесет значительные выгоды для бизнеса в виде улучшенного управления жизненным циклом активов и продуктов, улучшения связи между предприятиями, оптимизации использования ресурсов, а также формирования и развития новых отраслей. Под влиянием цифровизации увеличивается мобильность в удовлетворении потребностей клиентов (это устраняет региональные ограничения и зависимость от местоположения поставщиков). В результате создаются цепочка добавленной стоимости и новые бизнес-модели [4].

При этом, учитывая готовность различных хозяйствующих субъектов к его использованию, особое внимание следует уделить гармонизации использования методов цифровой экономики в производственных и управленческих процессах, синхронизации мер по продвижению методов цифровой экономики в рамках полного цикла производства. и воспроизводство проектов. В связи с этим необходимо учитывать пропорциональность технической поддержки всех участников процессов в информационно-коммуникационных сетях.

Оцифровка позволяет снизить негативное влияние на жизнедеятельность человека, а также улучшить экологическое состояние городов и природных объектов за счет сбора информации о качестве воздуха, воды, отходов и т. Д. BigBelly, например, представляет собой устройство на

солнечной энергии, которое сводит к минимуму отходы и передает данные для помощи в планировании мероприятий по сбору мусора. Благодаря его использованию Бостонский университет снизил частоту сборки мусора с 14 до 1,6 раз в неделю.

Таким образом, новые технологии приносят пользу бизнесу, людям и обществу в целом. Однако есть и негативные последствия и специфические риски цифровой трансформации.

Присоединение к цифровой экономике может иметь негативные последствия из-за переходных событий (нехватка ресурсов, возможностей, институтов, взаимодействия). Рост цифровой экономики обычно приводит к определенным потерям для развивающихся стран, например, к увеличению небезопасности из-за необходимости найти баланс между, скажем, цифровой безопасностью и конфиденциальностью. Кроме того, существуют общие угрозы для стран: цифровые технологии могут способствовать «возвращению производства» в развитые страны, точнее, их обратной индустриализации [4].

В своем Докладе о мировом развитии Всемирный банк выделил следующие риски цифровизации:
• кибербезопасность;
• возможность массовой безработицы;
• Рост «цифрового разрыва» между гражданами и бизнесом внутри страны, а также между странами (разрыв в цифровом образовании с точки зрения доступа к цифровым услугам и продуктам и, как следствие, разрыв в благосостоянии).

Более того, цифровизацию не следует рассматривать только как организационную, техническую или финансовую деятельность. Это сложный процесс, который оказывает большое влияние на сектор людских ресурсов. Изменения коснутся сотен миллионов рабочих мест. В ядре команд необходимо формировать у персонала новые навыки, что приводит к дополнительным затратам на программы обучения.

Развитие цифровой экономики является одним из стратегически важных вопросов как для Узбекистана, так и для других стран, что определяет его глобальную

конкурентоспособность. В связи с этим в стране принимаются комплексные меры по активному развитию цифровой экономики, повсеместному внедрению современных информационно-коммуникационных технологий во всех секторах и отраслях, особенно в государственном управлении, образовании, здравоохранении и сельском хозяйстве.

В частности, запущено более 220 приоритетных проектов по совершенствованию системы электронного правительства, дальнейшему развитию местного рынка программных продуктов и информационных технологий, созданию IT-парков во всех регионах страны, а также обеспечению отрасли квалифицированными кадрами. [1].

Одним из важных условий успешного развития цифровой экономики является кадровая обеспеченность всех уровней. В этой связи важно помнить, что профессионалы в области инфраструктуры ИКТ, как и профессионалы, должны иметь квалификацию с использованием методов, типичных для цифровой экономики. Кроме того, необходимо следить за тем, чтобы не только исполнение, но и интеллектуальные процессы, распределение работы между разными уровнями и квалифицированными специалистами существенно различались. Это требует соответствующих изменений в организации труда, в процессе обучения в средних специальных и высших учебных заведениях, готовящих специалистов в области бухгалтерского учета, аналитического анализа. Поскольку время (3-5 лет) требуется для своевременного обеспечения экономики квалифицированными кадрами, необходимо ускорить реформы в области подготовки и переподготовки кадров. Поэтому в учебных заведениях проводится большая работа по внесению соответствующих изменений в учебные планы, программы и формы обучения.

В соответствии с поставленными таким образом задачами необходимо активно работать над созданием условий для эффективного использования возможностей цифровой экономики в нашей стране, используя опыт использования современных зарубежных информационных технологий.

References:

1. (2020). *Ob utverzhdenii Strategii «Cifrovoj Uzbekistan - 2030» i mer po ee effektivnoj realizacii. Ukaz Prezidenta Respubliki Uzbekistan.* (Nacional'naya baza dannyh zakonodatel'stva, 06.10.2020, №20.06/ 6079/1349).

2. (2016). *Dlya konkurentosposobnosti RK nuzhno usilit' cifrovizaciyu ekonomiki – The Boston*

Consulting Group // IA BNews.kz. Novosti. Analitika. Tekhnologiya. –Astana, 24.09. – Retrieved from https://bnews.kz/ru/news/ekonomika/tehnologii/dlya_effekta_ot_tsifrovizatsii_rk_neobhodimi_sovmestnie_deistviya_gosudarstva_i_chastnogo_sektora__the_boston_consulting_group

3. Mel'nika, M.V., & Salin, V.N. (2018). Predposylki effektivnogo razvitiya cifrovoj ekonomiki. *Uchet. Analiz. Audit.* T. 5, №6, p.8.

4. (2017). *Cifrovaya transformaciya ekonomiki i promyshlennosti: Problemy i perspektivy* / S.-Peterb. politekh. un-t Petra Velikogo; pod red. A.V. Babkina. (p. 27,79-80). SPb..

5. Ismailova, N. (n.d.). *Raqamli iqtisodiyot tarifi, koncepciyasi va uning ko'lamini o'lchash*. Retrieved from http://www.biznes-daily.uz/birjaexpert/69992-raqamli-iqtisodiyot-tarifi-kontsptsiyasi-va-uning-kolamini-olchash

6. (n.d.). Retrieved from https://www.kun.uz/news/2020/07/06/raqamli-iqtisodiyot-rivojlanish-trendlari-va-xususiyatlari

7. Mesenbourg, T.L. (2001). *Measuring the Digital Economy*. U.S. Bureau of the Census [Electronic resource]. Retrieved 22.10.2018 from https://www.census.gov/content/dam/Census/library/working-papers/2001/econ/digitalecon.pdf

8. Mitin, V. (2017). *Sem' opredelenij cifrovoj ekonomiki*. CRN IT-biznes. Novosti. Moscow.–18.01. Retrieved from https://www.crn.ru/news/detail.php?ID=116780

9. Urmanceva, A. (2017). *Cifrovaya ekonomika: Kak specialisty ponimayut etot termin*. RIA Nauka. – Moscow. 16.06. Retrieved from https://ria.ru/science/20170616/1496663946.html

10. Golovenchik, G.G. (2019). *Cifrovizaciya belorusskoj ekonomiki v sovremennyh usloviyah globalizacii*. (p.257). Minsk: Izd.centr BGU.

11. Yuldasheva, N.A. (2018). Method of diagnostics of the enterprise in the system of anti-crisis management. *ISJ Theoretical & Applied Science*, 04 (60): 248-252. https://dx.doi.org/10.15863/TAS.2018.04.60.45

12. Yuldasheva, N. A. (2020). Inqirozga qarshi boshqaruvda davlat tomonidan tartibga solishning asosiy yo'nalishlari. *Ekonomika i finansy (Uzbekistan)*, №2 (134). https://cyberleninka.ru/article/n/in-irozga-arshi-bosh-aruvda-davlat-tomonidan-tartibga-solishning-asosiy-y-nalishlari

13. Yormatov, I. T., Yuldasheva, N. A., & Toshpulatov, I. A. (2020). Issues of electronic trade development in Uzbekistan. *ISJ Theoretical & Applied Science*, 12 (92), 211-215. Soi: http://s-o-i.org/1.1/TAS-12-92-40 Doi: https://dx.doi.org/10.15863/TAS.2020.12.92.40

14. Yuldasheva, N.A., Toshpulatov, I.A. (2020). The Importance of Government Regulatory Mechanisms in Anti-crisis Management. Scopus Q3, *Journal of Advanced Research in Dynamical & Control Systems*, Vol. 12, No. 7, pp.738-744. DOI: 10.5373/JARDCS/V12I7/20202057. https://www.jardcs.org/abstract.php?id=544

15. Yuldasheva, N.A. (2018). Korhonalarda inqirozlarning vujudga kelish sabablari va omillari. *Ekonomika i finansy (Uzbekistan)*, №4. https://cyberleninka.ru/article/n/korhonalarda-in-irozlarning-vuzhudga-kelish-sabablari-va-omillari

16. Yuldasheva, N.A. (2021). *Mery antikrizisnogo upravleniya na predpriyatiyah*. Sovremennaya nauka. XXI vek: nauchnyj, kul'turnyj, IT kontekst [Elektronnyj resurs]: sbornik statej I Mezhdunarodnoj nauchno-prakticheskoj konferencii, Omsk, 20 yanvarya 2021 g. / otv. red. V.E. Mihajlova. (pp.310-314). Omsk: Izd-vo Mnogoprofil'noj akademii nepreryvnogo obrazovaniya.

17. Yuldasheva, N.A. (2019). *Antikrizisnaya strategiya na predpriyatiyah legkoj promyshlennosti. Prioritetnye vektory razvitiya promyshlennosti i sel'skogo hozyajstva*: materialy II Mezhdunarodnoj nauchno-prakticheskoj konferencii. Tom III. – Makeevka. 2019 g. 11 aprel'. pp.341-346. https://scholar.google.com/scholar?oi=bibs&cluster=13208487116094681718&btnI=1&hl=ru

18. Yuldasheva, N.A. (2019). Innovative management in improving anti-crisis management. *The Way of Science. International scientific journal*, №1 (59), ISSN 2311-2158. p.51-54. (Global Impact Factor – 0.543). www.scienceway.ru

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ETHNOCULTURAL PROCESSES IN THE WESTERN CASPIAN REGION IN THE PERIOD OF THE GREAT MIGRATION OF NATIONS

Abstract: *The article investigates the issues of ethnocultural processes in the Western Caspian region during the period of the Great Migration of Nations. An important factor in the history and development of ethnocultural processes in the region was its specific geographical position, which became the main bridge connecting Eastern Europe with Western Asia. At this time, complex ethnocultural processes synthesizing the traditions of the sedentary agricultural and nomadic world, both local and foreign, gave a powerful impetus to ethnocultural transformational consolidation. The dominant role in this process belonged to the Turkic ethnos, and the Turkic language began to play the role of the intertribal communication.*

Key words: *Ethnocultural processes, Hun tribes, Sabirs, resettlement policy, the Silk Road.*

Language: *Russian*

ЭТНОКУЛЬТУРНЫЕ ПРОЦЕССЫ В ЗАПАДНОМ ПРИКАСПИЙСКОМ РЕГИОНЕ В ЭПОХУ ВЕЛИКОГО ПЕРЕСЕЛЕНИЯ НАРОДОВ

Аннотация: *В статье рассматриваются вопросы этнокультурных процессов Западного Прикаспийского региона в эпоху Великого переселения народов. Важным фактором в истории и развитие этнокультурных процессов региона явилось уникальное географическое положение его, ставший главным мостом, соединившим Восточную Европу с Передней Азией. В это время сложные этнокультурные процессы, синтезирующие традиции оседло-земледельческого и кочевого мира, как местного, так и пришлого, дали мощный импульс этнокультурной трансформационной консолидации. Доминирующая роль в этом процессе принадлежала тюркскому этносу, и тюркский язык стал исполнять роль языка межплеменного общения.*

Ключевые слова: *этнокультурные процессы, гуннские племена, сабиры (савиры), переселенческая политика, Шелковый путь.*

Введение

Западный Прикаспийский район был из тех регионов Восточного Кавказа, где в эпоху Великого переселения народов ярко проявились сложные этнокультурные процессы, синтезируя традиции оседло-земледельческого и кочевого мира как местного, так и пришлого. Современная этническая карта отражает результаты многотысячелетних этногенетических и миграционных процессов в регионе. Важным фактором в истории и развитие этнокультурных процессов Западного Прикаспийского региона явилось уникальное географическое положение его. Этот район с древнейших времен был не только главным мостом, соединившим Восточную Европу с Передней Азией, но и стал ареной борьбы, всесторонних контактов различных цивилизаций.

Данные письменных источников и накопленные новые фактические материалы,

полученные при археологические раскопки раннесредневековых памятников Западного Прикаспийского региона позволяют рассматривать целый ряд проблем этнического и культурного развития региона в эпоху Великого переселения народов.

Обсуждение

С первых веков I тысячелетия нашей эры прослеживаются активные миграционные продвижения кочевников на Прикаспийскую равнину: сначала сарматские, аланские, массагетские, затем гуннские племена. Одновременно с этим в это время активизируется международный торговый путь, отрезок Шелкового пути по Прикаспийскому коридору [1; 2]. На всем протяжении Шелкового пути происходил интенсивный взаимообмен ценностями материальной и духовной культуры [1, с. 113].

Гунны появились в Восточной Европе в II в., и сначала они располагались в Прикаспийском регионе (3, с.30). Утверждение на Северном Кавказе гуннского господства и их миграция на юг существенно повлияли на характер развития социально-экономических, политических и этно-культурных отношений в Прикаспийском регионе. Путь гуннских племен на юг, в том числе на важнейшую мировую торговую трассу того времени – Великий Шелковый путь, лежал через Дербентский проход. Волны активных миграций гуннов на юг начались в III-IV вв., особенно в 70-е гг. IV в. и носили массовый характер. Наиболее известен их поход 395 г. через Прикаспийский регион в Малую Азию и Сирию. Проникнув в пределы Албании, гунны, наряду с местным оседло-земледельческим населением, также сталкивались и с полукочевыми и кочевыми племенами, в частности, маскутами, обитавшими здесь с первых веков I тысячелетия. Маскуты, упомянутые в древнеармянских источниках, по мнению исследователей, являются массегетами античных авторов [4; 5, с.22-23]. На Прикаспийской равнине они создали свое государство. В конце III века царство маскутов подчинялось Сасанидам. В надписях Нарсе из Пайкули, относящихся к 293 г. перечислены цари и владетели, зависимые от Сасанидов. Среди многочисленных зависимых государей, прибывших ко двору шаханшаха, есть имя и царя маскутов (6, с. 53). Название племен маскуты отложилось в топониме Мушкур, который охватывает равнину между реками Самур и Гильгильчай [7, с.173-178]. Маскутское царство, судя по источникам, в IV - V вв. было известно как государство «Масаха-гуннов» [8, с. 93]. Оно в период своего расцвета простиралось от Дербенда на севере до горы Бешбармага, иногда и до руки Кура на юге. В этом государстве сосуществование

кочевых племен с оседло-земледельческим населением проявились во всех сферах – в политике, экономике, культуре и этногенезе. Археологические данные позволяют предполагать, что городище Торпаккала, расположенное 25 км к югу от Дербента и городище Джанахыр, расположенное вблизи города Хачмаз, в IV - V вв. были важнейшими центрами маскутского царства. Городище Джанахыр расположено более чем на 10 холмах, находящихся на территории длиной 2-2,2 км, шириной 0,8 -1 км вдоль высохшего русла реки Агчай. Археологические раскопки велись на одном из холмов (Орта тепе), занимающего площадь 7 га. Толщина культурного слоя более 3 м. Выделены культурные слои поздней античности, раннего средневековья (IV-VII вв.) и монгольского периода. Культурный слой IV-VII вв., мощностью 1,5 м выделяется насыщенностью и отражает интенсивную городскую жизнь [9, s. 49-50].

Письменные источники позволяют характеризовать царство «Масаха-гуннов» как раннефеодальное государство со значительными пережитками родоплеменного общества. В военно-политической сфере этого государства активно участвовали гунны.Фавст Бузанд сообщая о событиях 30-х годов IV века прежде всего, отмечает многочисленность гуннов в войсках царя маскутов Санесана, а затем перечисляются кавказские племена тавасарпов, хечматаков, ижмахов, гатов, глуаров, гугаров, шигбов, баласичев, егерсванов и множество других [10, кн. 3, гл. 7]. По мнению С.Ашурбейли таваспары локализуются в Табасаране, в Южном Дагестане. Название племени хечматаки отложилось в топониме Хачмаз на Северо-Восточном Азербайджане. Считается, что иджмахи жили в районе Шамахы, баканы в Баку и на Абшероне [5, с. 27]. В анонимном источнике перечисляются племена Западного Прикаспийского региона: леки, гунны, хазары, зекены (цекан), хенуки (хенави), каспы, шарваны, хсрваны, таваспары, хечматаки, ижмахи, баканы, пиконаки (печенеги), маскуты, которых исследователи локализуют в зонах Дербента, Табарсарана, Хачмаза, Губы, Сиазани, Бешбармага, Абшерона, Баку, Шамахы, Муганской степи [11, с. 50-51; 5, с. 26].

Паласа-сыртский могильник, оставленный населением царства «Масаха-гуннов» и изученный Л.Б.Гмыря, отчетливо отражает процессы этнополитической и социально-экономической интеграции [12]. Не случайно, что источники зафиксировали этнополитические изменения, произошедшие в этот период, упоминая о гуннах и самостоятельном Баласагунском царстве, земли которого

простирались от реки Кура до Каспийских ворот в Прикаспийском регионе [13, с. 86].

Некоторые историки отмечают, что переселение гуннов и гегемония их в военно-политической жизни Кавказа ознаменовалась усилением разрушений и ограблений и вызвала упадок в социально-экономическом и культурном развитии. Археологические изыскания на территории Северо-Восточного Азербайджана и Южного Дагестана демонстрируют, напротив, иную картину, зафиксированы многочисленные городища, руины крепостей и поселений сельского типа [14; 15, с.314, рис. 2]. Высокая плотность поселений эпохи «Великого переселения народов» несомненно, свидетельствует об экономическом и культурном подъеме.

В начале 60-х годов V века в Северо-Западном Прикаспийском регионе образовалась новая мощная группировка гуннов, известных под именем сабир (савир) [16, с. 43]. Сабиры (савиры), укрепившиеся на Северо-Востоке Кавказа, заключая союз то с государством Сасанидов, то с Византийской империей, сыграли активную роль в военно-политических, этно-культурных процессах Прикаспийского региона. Византийский историк Прокопий Кесарийский отмечает, что «Савиры является гуннским племенем, живут около Кавказских гор. Племя это очень многочисленное; разделенное, как полагается, на много самостоятельных колен. Их начальники издревле вели дружбу одни с римским императором, другие - с персидским царем» [17, с. 407].

Активизация на исторической арене Европы гуннов-савир и энергичные попытки продвижения их на Южный Кавказ привело вначале VI в. (503—508 гг.) к затяжному военному противостоянию с Сасанидским Ираном [17, с. 71—72; 15, с. 319]. Сасаниды для сдерживания тюркской «пассионарной вспышки» и укрепления своего владычества в этом регионе предприняли неотложные меры. Ими были возведены грандиозные фортификационные сооружения (Дербендская, Гильгильчайская, Бешбармагская стены), в самых узких местах сплошь перекрывавшие Прикаспийскую низменность от моря до гор. В письменных источниках в связи со строительством оборонительных стен отмечаются имена четырех шаханшахов - Йездигерда II, Пероза, Кавада I, Хосрова I Ануширвана. Строительством оборонительных стен, в которых воплотились приемы и методы фортификационного искусства Сасанидского Ирана, руководили сасанидские чиновники, но вся тяжесть строительных работ падала на население Албании. Венцом этого фортификационного искусства является Дербендская каменная оборонительная стена, возведенная при шаханшахе Хосрове I Ануширване.

С целью создания надежного форпоста на этой территории шаханшахи проводили и активную переселенческую политику, переселяя сюда ираноязычные племена из внутренних районов Ирана. Они были размещены вдоль оборонительных линий, в местах, имеющих военно-стратегическое значение. Йакут ал-Хамави пишет, что «Сасанидские цари придавали этому краю большое значение ввиду его важности и внимательно следили за всеми его делами (из-за страха перед вторжением северных племен). Поэтому для (обороны) этого места были назначены стражи из переселенцев из разных стран и из людей, пользующихся у них доверием» [18, s.153].

Махмуд Кашгари отмечает, что татами тюрки называют тех, кто говорит на фарси. По мнению исследователей, первоначальное значение слова тат было «иранец», «говорящий по-ирански», «оседлый», «земледелец». Таты селений Балаханы и Сураханы на Абшероне имеют самоназвание «парс», татам других зон это самоназвание неизвестно (7, с. 103). Часть гирканов и мардов также переселились с юга на Абшеронский полуостров. Это подтверждается топонимами Шахри Гюрган, мыс Гюрган, Мардакан на Апшероне [5; 7, с. 203]. Таты, переселенные в рассматриваемый регион, частично приняли христианство, а большая их часть (хизинцы, таты Апшерона и Нагорного Ширвана) оставались огнепоклонниками [7, с. 104].

Наряду с ираноязычными племенами иудеи также были переселены на территории рассматриваемого региона как население пользующихся доверием у Сасанидов. Считается, что предки современных горских евреев были переселены в Прикаспийский регион в последние годы правления шаханшаха Кавада I или, скорее всего в первые годы правления его сына Хосрова I Ануширвана [19, с. 15]. Согласно «Дербенд-наме» шаханшах Хосров Ануширван в город Дербенд переселил из внутренних районов Ирана 3 тыс. семейств, служивших опорой Сасанидских властей. Эти евреи, ставшие предками горских евреев, были расселены от Табасарана до Абшерона [20, с. 122]. В результате переселенческой политики Сасанидов в этническом составе Прикаспийского региона появились иудеи.

В V-VI вв. в результате взаимодействия произошли существенные изменения в экономике, социальном строе, культуре как кочевого, так и оседло-земледельческого населения. Переселенческая политика Сасанидов с одной стороны и инфильтрация северных кочевников, постепенно переходящих к оседлому образу жизни с другой, привели к плотному заселению

региона. Это отчетливо прослеживается по археологическим памятникам. Возникают городские поселения, носителями которых в основном, являются бывшие кочевники. Одним из таких был город Шабран. Анализ сообщений письменных источников, данные топонимики и результаты археологических исследований позволяют констатировать, что первопоселенцами этого города были сабиры. Примечательно, что в словаре Махмуда Кашкари город Шабран отмечается под названием Сабиран [21; 22; 9].

Заслуживают рассмотрения также сведения средневековых письменных источников, характеризующие Шабран городом, населенным тюрками. Из поэмы «Шахнаме» явствует, что персидский царь Биджан был в плену в Туране и богатырь Рустам его освободил. Автор XIII века З.Казвини, географ XV века А.Бакуви темницу, где царь Афрасиаб заточил персидского царя Бижана, локализовали в Шабране. «Шабуран – городок в области Баб –ал-Баба. Там есть колодец Бижана. Это – глубокий колодец. Когда царь (тюрок) Афрасиаб победил Бижана, царя (персов), он решил не убивать его, и подвергнуть его мучениям, так как претерпел много от Бижана во время сражений. И вот он заковал его в оковы, заточил его в этот колодец и закрыл отверстие большой скалой. Рустам скрытно пробрался к колодцу и похитил его. Он снял скалы с отверстия колодца и привел Бижана в страну персов» [23, с. 95].

Таким образом, накануне арабского завоевания в этническим составе населения региона доминировал тюркский этнос.

Прикаспийский регион отличался не только полиэтническим составом, но и конфессиональной пестротой. В целях идеологического воздействия на местное население Сасаниды насильно насаждали зороастрийскую религию. Албанская церковь, в свою очередь, старалась распространить христианство среди племен маскутов и гуннов. Первые шаги в этом направлении были предприняты еще в 30-ые годы IV века. Однако деятельность христианского проповедника Григориса среди маскутов и гуннов не увенчалась успехом, закончилась его трагической гибелью [24, кн. I, гл.10]. По мнению М.Дж.Халилова св. Григорис совершил две поездки в страну маскутов. Первая попытка Григориса была увенчана успехом. Во время первого визита он взял с собой в Албанию для христианского вероучения троих маскутских царевичей [25, с. 163]. В этой связи заслуживает внимания данные «История албан» о св. Моисее, св. Данииле и св. Илие – сыновьях царя масгутов Сенесана, которые, проживая на горе вблизи Амараса, учились у св. Григориса вместе с 3870 членами христианской общины» [24, кн. II: 5; 25, с. 163].

Однако деятельность христианского проповедника св. Григориса среди маскутов и гуннов не увенчалась успехом, вторая поездка закончилась его трагической гибелью. «Тогда, схватив юного Григориса, они привязали его к хвосту свирепого коня и пустили по полю Ватнеан» [24, кн. I, 14]. По приказу царя Санесана были перебиты маскутские христиане, в том числе были уничтожены и маскутские царевичи. С тех пор Ватнианское поле (равнина) близ Дербента, где мученически погиб Григорис, почиталось христианской церковью Кавказа, как одна из важнейших религиозных святынь. Ещё в XIX в. здесь существовала часовня на месте гибели епископа, посещавшаяся многочисленными паломниками [26, с.20].Однако царю «Масаха-гуннов» Санесану не удалось искоренить христианство в своей стране. Среди католикосов, находившихся в резиденции Албанской церкви в Чоле, упоминается «гуннский епископ Иунан, бывший в стране маскутов» [24, I: 19, III: 23] в самом конце IV века. Католикос Албании Закарийа с целью укрепления позиции христианства среди населения Северо-Восточной Албании (Чола) перенес резиденцию католикоса Албании в Чола [27, s. 67]. Деятельность албанской церкви по распространению христианства, начиная с VI века главным образом была направлена на христианизацию кочевников Севера - населения страны гуннов. Албанский миссионер епископ Кардост в 522-535 гг., в течение 14 лет, находился в стране гуннов. Он перевел священную книгу христиан на гуннский язык [27, s. 73]. Однако монотеистическое учение среди кочевого населения не имело успеха и переход от язычества к христианству происходил постепенно и медленно. Но, судя по погребальным памятникам маскутов, обнаруженным в Юго-Восточном Дагестане (Паласа-сырт, Кухмазкунт, Ашагы Стал газмалар и т.д.) и Северо-Восточном Азербайджане (Гухуроба, Гиджаноба, Худжбала, Сандыгтепе), христианство не имело обширного распространения среди них. Погребения раннехристианскими захоронениями с некоторыми языческими элементами обнаружены и изучены в Атачайском могильнике на территории Северо-Восточного Азербайджана [25, с.213-214].

Зороастризм издревле был распространен в прикаспийском регионе, в особенности в Абшеронском полуострове и южнее его. С древних времен почитался зороастрийцами Апшеронский полуостров, город Баку как священное место из-за наличия многочисленных источников нефти и выходов газа, которые естественным образом загорались. По мнению Эльнура Велиева храм огнепоклонников, расположенный в поселке Сураханы, является наиболее древней и вполне вероятно может

относиться к III веку. Считается, что слово "муган" означало "зороастриец" или "огнепоклонник", а Мугань, Муганская степь, расположенная в Прикаспийском регионе, была обиталищем магов [28, с. 68].

В северных областях региона зороастризм не имел успеха. Албанский историк отмечает, что «Безнравственный и безбожный царь Персии, подобно неистовому и взбешенному большому псу, прилагал усилия подчинить себе все другие монархии и в то же самое время разрушить церкви, христианскую религию и веру, восстановить своей властью безумные идолопоклонства [24, кн.1, гл.16].

В регионе значительное влияние имели также языческие верования. М.Дж.Халилов выделяет Дербенд-Шамахинский локальный вариант албанской языческой культуры эпохи раннего средневековья. Для этой культуры характерны керамика с каннелюрным орнаментом, кюпы напоминающие пифосы, керамические сосуды, на днище которых имеется изображение зооморфного или астрального характера и т.д. Дербенд-Шамахинский локальный вариант албанской языческой культуры отчетливо отражает влияние культуры кочевников Севера [29, s. 46-47].

Взаимодействие традиций местного, иранского и кочевого миров оказывали заметное, порой синтезирующее воздействие на культурные комплексы. Местные мастера охотно воспринимали, иногда даже имитировали сюжеты и мотивы сасанидского искусства, что отчетливо прослеживается в памятниках глиптики и в художественном металле. Серебряное блюдо, обнаруженное в Ленкорани, аналогично изделиям североиранской школы торевтики. Стенки чаши с наружной стороны украшены ложчатым орнаментом, выполненным тиснением. Изнутри, в центре плоского дна, имеется рельефное изображение горного барана со «священной лентой» на шее. Образ барана связывался с инкарнацией зороастрийского божества царской удачи – Хварены. «Священные ленты» на шее животных – характерное явление в позднесасанидском искусстве. Предполагают, что наличие священных лент имело идейную нагрузку, подчеркивало, что изображено не простое животное, а инкарнация божеств [30, с.59-63; 31, с. 363]. Не малое место в развитии местной культуры имели достижения цивилизации кочевников: седло и стремена, искусство верхового боя, изделия из кожи, ювелирные изделия. Местные ювелиры, учитывая вкус гуннов, при изготовлении золотых изделий применяли полихромный стиль, широко распространённый среди кочевников. Нельзя не отметить, металлические зеркала из раннесредневековых памятников Прикаспийского региона: Паласа-сыртского могильника и могильника Гухур-оба.

Взаимовлияние культур обнаруживается и в погребальных памятниках. В могильниках Худжбала, Кухуроба, Сандыгтепе, Джанахыр [32] зафиксирован своеобразный синтез двух культур – местной оседло-земледельческой и кочевого Севера.

Заключение

Подытоживая выше отмеченных можно констатировать, что IV-VI вв. являются важным периодом в истории Прикаспийского региона, где происходили сложные этнокультурные процессы, взаимопроникновения культур местных племен, народов с их богатыми оседло-земледельческими и ремесленными традициями и пришлых кочевых племен Севера с их мобильностью и военно-политической активностью. Тесные контакты тюркских племен с племенами кавказского и ираноязычного кругов, процессы их взаимной ассимиляции дали мощный импульс этнотрансформационной консолидации. Волны миграций и огромный пассионарный потенциал кочевников, оседание их в различных районах Албании, в частности в рассматриваемом регионе гуннских племен, обусловили рост удельного веса тюркского населения, а тюркский язык стал выполнять роль языка межплеменного общения.

References:

1. (2020). *Azerbaijan na Shelkovom puti.* Pod redaktsii akademika Sh.M.Mustafayeva. (384 p.). Baku: "Təhsil".

2. Gadzhiev, M.S. (1997). *Mezhdu Evropoi i Aziei. Iz istorii torqovykh svyazei Dagestana v Albano-sarmatskii period.* (p.154). Makhachkala.

3. Obrusanszky, B. (2009). Late Huns in Caucasus. *Jurnal of Eurasian Studies*, Vol.1, İssue 2, pp. 24-36

4. Aliev, I., & Aslanov, G. (1975). K voprosu o proniknovenii na territoriyu Azerbaijana plemen sarmato-massagetsko-alanskogo kruga v pervye veka nashego letoischisleniya. *Materialy po arkheologii I drevnei istorii Severnoi Osetii*. T. III. Ordzhonikidze, pp. 134-135.

5. Ashurbeyli, S. (2006). *Gosudarstvo Shirvanshakhov*. (p.328). Baku: Izd. Abilov, Zeinalov i synov'ya.

6. Kasumova, S.Y. (1983). *Yuzhnyi Azerbaijan v III-VII vv*. (p. 168). Baku: Elm.

7. Geybullaev, G.A. (1991). *K etnogenezu azerbaijantsev*. (p. 552). Baku: Elm.

8. Gmyrya, L.S. (1996). *Strana gunnov u Kaspiiskix vorot*. (p.286). Makhachkala: Dag.kizh.izd-vo.

9. Dostiyev, T.M. (2001). *Şimal-Şərqi Azərbaycan IX-XV əsrlərdə*. (p.396). Bakı: Bakı universitetinin nəşr.

10. Buzand, F. (1953). *İstoriya Armenii*. Per. c drev.arm. i komment. M.A.Gevorgyana. (p. 240). Erevan: Izd-vo AN Arm.SSR.

11. (1877). *Armyanskaya geografiya VII veka.* Izd. teksta, per. i prim. K.Patkanova.(p.84). Sankt-Peterburg: Tipografiya Imperatorskoi Akademii Nauk.

12. Gmyrya, L.S. (1987). Pogrebal'nyi obryad Palasa-syrtskogo mogil'nika (etnosotsial'naya interpretatsiya). *Etnokul'turnye protsessy d drevnem Dagestane*. Makhachkala, pp.72-89.

13. Nasibli, Yu.M. (2017). *Formirovanie azerbaijanskogo etnosa. Azerbaijantsy*. (pp.83-93). Moskva: Nauka.

14. Orucov, A.Ş. (2018). *Şimal-Şərqi Azərbaycan ilk orta əsrlərdə*. (p. 304). Bakı.

15. Gadzhiev, M.S., Bakushev, M.A., Borisov, A.B., & Ryabogina, N.E. (2020). O migratsionnyx i demograficheskix protsessax na territorii Dagestana d Albano-sarmatskii i rannesrednevekovyi periody. *Stratum Plus Journal*, Issue 4, pp. 309-324.

16. (n.d.). Prokopii Kesariiskii. *Voyna s gotami*. (p.514). Moskva:Izd-vo AN SSSR.

17. Jafarov, Yu.R. (1993). *Gunny I Azerbaijan*. (p.107). Baku: Azerneshr.

18. Əliyeva, N.A. (2020). *"Mucəm əl-buldən" əsərində Azərbaycan və Qafqaz*. (p. 424). Bakı: "Elm və təhsil".

19. Semenov, İ.O. (n.d.). *O proiskhozhdenii gorskix evreev*. (p. 32). Moskva: RAN.

20. Kazikhanova, A.A., & Abdulpatakhanova, Kh.M. (2013). K voprosu ob etapax rasseleniya gorskix evreev na territorii Severo-Vostochnogo Kavkaz. *Vestnik Dagestasnskogo gosudarstvennogo universiteta*, vyp. 4, pp. 120-123.

21. Kaşğari, M. (2006). *Divanü lüğat-it-türk*. IV cilddə. Bakı: Ozan.

22. Əliyarov, S. (1991). Kitabi "Dədəm Qorqud" əlyazmaları üzərində çalışmalar. *Azərbaycan filologiyası məsələləri*. Buraxılış III. Bakı, Elm, pp. 135-160.

23. Abd ar-Rashid al-Bakufi. (1971). *Kitab talkhis al-asar al adzhaib al-malik al-kakhkhar*. Izdanie teksta, perevod, primechaniya i prilozheniya Z.M.Buniya-tova. (p. 162). Moskva: Nauka.

24. Kagankatvatsi, M. (1861). *Istoriya agvan*. Per. c arm. K.Patkanova. Sankt-Peterburg.

25. Xalilov, M. J. (2018). Khristianskie pamyatniki Albanii (Azerbaijan) IV-X vv. *Religii Tsentral'noi Azii I Azerbaijana*. Tom IV. Khristanstvo. Tashkent-Samarkand: MITSAI, pp. 157-227

26. Kudryavtsev, A.A., & Kudryavtsev, E.A. (n.d.). *Derbent v istorii rannego xristianstva na Severo-Vostochnom i Vostochnom Kavkaze*. 1700-letie prinyatiya xristianstva v Derbente kak gosudarstvennoi religii Kavkazskoi Albanii. Materialy Vserossiiskoi nauchno-prakticheskoi konferentsii. (pp. 19-29). Makhachkala: Alef.

27. Xəlilov, M.C. (2011). *Albaniyanın xristian abidələri (IV-X əsrlər)*. (p. 344). Bakı: "Xəzər Universiteti" nəşr.

28. Dorn, B.A. (n.d.). *Kaspii. O pokhodax drevnikh russkikh v Tabaristan*. (p. 718). Sankt-Peterburg: Imperatorskaya Akademiya Nauk.

29. Xəlilov, M.C. (2007). Albaniyanın ilk orta əsr maddi mədəniyyəti. *Azərbaycan arxeologiyası*, №1-2, pp. 38-54.

30. Koshkarly, K.O. (1985). *Antichnaya i rannesrednevekovaya torevtika iz Azerbaijana*. (p. 140). Baku: Elm.

31. Xalilov, J.A. (2003). Rannesrednevekovaya Albaniya v IV-VII vv. *Krym, Severo-Vostochnoe Prichernomor'ya i Zakavkaz'e v epokhu srednevekov'ya.* Moskva: Nauka, pp. 351-366.

32. Xəlilov, M.C. (2009). *Albaniyanın qəbir abidələri (IV-X əsrlər)*. (p. 180). Bakı: "Nafta-Press" nəşr.

QR – Issue   QR – Article

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INTRODUCTION OF DIGITAL TECHNOLOGIES IN THE SPHERE OF HOUSING STOCK MANAGEMENT IN THE REPUBLIC OF UZBEKISTAN

Abstract: *In the digital economy, information is the most important resource that is directly formed, stored and transferred through information technology. Within the framework of this issue, it seems necessary to consider the information interaction of participants in the housing and communal services market - management and resource supplying organizations, government agencies, as well as property owners.*

Key words: *management, housing stock, information system, geographic information system, GIS, housing and communal services, management system.*

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Introduction

The coronavirus pandemic in the world has changed people's habits and affected almost all areas of life. The most notable trend is global digitalization. It should be noted that digitalization is entering a qualitatively new stage, its development characterized by the development of information and communication technologies. According to experts, digitalization has huge potential for business and society over the next decade and could bring an additional $ 30 trillion. dollars of the world economy over the next ten years (until 2025) [1].

Currently, there is an increase in the construction of residential real estate in the world, thereby changing housing standards. Consequently, there is a growing need for effective management of both private and public property. In the digital economy, there is a digital transformation of cities, united under the term "smart city", they imply the use of digital technologies in city management, these innovations should improve the lives of citizens, improve management efficiency, which in turn leads to an increase in resource savings.

Every year, the world's megacities are getting smarter thanks to the introduction of smart technologies. Smart systems in Barcelona have solved problems with water, electricity, air pollution, debris, noise and parking spaces. Smart systems are changing the world and are already in use in London, Oslo, Amsterdam, Shanghai, Zurich, Boston, Nice, Amsterdam, Stockholm and others.

The Republic of Uzbekistan, which implements the national program "Digital Uzbekistan" [2] and the project "Smart City" [3], is not an exception. According to international recommendations, the creation of favorable living conditions is achieved at the level of 20 square meters of living space per person. At the same time, the indicator of security in the Russian Federation is 23.4 sq. m., in Brazil - 19.4 sq. m., in Turkey - 17 sq. m.

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It should be noted that in recent years in Uzbekistan there has been a tendency to increase the level of housing provision (from 15.2 sq.m in 2015 to 15.8 sq.m in 2018) in the country as a whole, from 15.4 sq.m up to 16 sq.m in cities and 15.0 to 15.7 sq.m. in the countryside.

If you look at the context of the regions of Uzbekistan, the provision of housing per person remains quite low, for example, in Andijan region (10.4 sq. m), Bukhara region (14.8 sq.m), Jizzakh region (13.9 sq. m), Ferghana region (13.4 sq. m) and Surkhandarya region (12.7 sq. m) regions. The gap in the level of security of the regions (the highest Khorezm region: 24 sq.m) and the lowest (Andijan region: 10.4 sq. m) is more than twice [4]. But, despite the growth in the average living space per capita in the country as a whole, the level of housing provision in Uzbekistan remains relatively low compared to other countries.

As analyzes show, the main reasons for the current level of housing provision are: population density, which is associated with high birth rates; housing construction is out of balance with the demographic trend; the lack of a purposeful policy for the construction of residential buildings, considering the availability for the low-income population.

With the growth of the housing stock, it becomes necessary to create digital platforms and information databases in order to improve the quality of property management by using the entire set of information about the object, legal and spatial.

As mentioned above, industries in most countries of the world are already affected by digital transformation. The general trend towards digitalization affects, to a greater or lesser extent, all sectors of the economy and the housing sector is no exception.

Main part

The study of scientific works and studies of foreign experts shows how important databases and information technologies are in the formation of theoretical and practical aspects in the field of real estate management. It should be noted that methodological approaches have not been fully introduced into the practice of real estate management and have not been fully studied. The development of information systems for managing the country's housing stock, improving the property and social relations of the population to their homes, as well as further expanding the participation of homeowners in managing their property remain relevant to this day [5].

The main distinguishing feature of the information society is the widespread introduction of information and communication technologies (ICT) in all spheres of human life, including the housing and utilities sector. According to the Law of the Republic of Uzbekistan "On Informatization", the term "information technology" means a set of methods, devices, methods and processes used to collect, store, search, process and disseminate information [6].

As part of the scientific article, an analysis was made, which identified some problems in the field of real estate management, which have a negative impact on the efficiency of performing certain tasks.

Table 1 shows a list of the main tasks and information that is required by the subjects of the real estate market (the state, real estate owners, investors, real estate and financial organizations) in which the share of activities in the field of real estate management is large compared to the rest.

Table 1. Information necessary for the subjects of the real estate market*

Main tasks	Information about real estate objects required by subjects	Existing problems
Real estate accounting	Cadastral number, coordinates, information about the owner	There is no unified property management system
Information provision of subjects with information about the real estate object	Information depending on the needs and tasks of the subject of the real estate market	Lack of a unified electronic database Lack of reliable information
Real estate cadastral valuation	Taxable base, area, number of storeys, location, completion rate, wear, type of construction, environmental performance, market price, etc.	Lack of a unified electronic database Lack of reliable information
Tracking the degree of depreciation of real estate objects	Technical characteristics of the property	Lack of technical passports of real estate objects
Collecting property tax	Cadastral number, taxable base, cadastral value, legal information	Lack of reliable information
Technical content of the property	Technical characteristics of the property, layout	Lack of technical passports of real estate objects

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Real estate transactions	Legal information, market information	Lack of reliable information
Real estate appraisal	Legal purity, technical, spatial, environmental, cost characteristics of the property	Lack of reliable information
Investing projects	Legal purity, technical, spatial characteristics of objects	Lack of relationship with the state. subjects
Building	Legal clarity, market performance	Lack of a unified electronic database Lack of reliable information
Analytical forecast	Technical characteristics of the property, market indicators	Lack of a unified electronic database Lack of reliable information

Source: Compiled by the author based on the analysis of information resources of Uzbekistan

Based on the analysis, we can conclude that the main part of the problems is associated with the lack of necessary and reliable information about real estate objects. Accordingly, the solution to these problems is seen in the creation of a unified state digital platform, a unified digital platform and its implementation in the field of real estate management, will positively affect and fundamentally change the collection, storage and use of information about real estate objects [7].

To implement this idea, the authors propose the creation of electronic passports of real estate objects, which would be integrated with a geographic information system (hereinafter - GIS), since GIS works with all types of information that can be reflected on a map or on a diagram. This means that GIS is the technology that combines traditional information management models with maps and databases [8].

The introduction of electronic passports would allow combining existing documents certifying property rights, technical and cadastral passports into a completely new information management tool and would become the main documents, the content of which would include the main technical, physical, economic characteristics of real estate objects that are necessary for monitoring and management (pic. 1).

As noted above, when integrating an information base with GIS systems, they give significant advantages in real estate management, since GIS shows an integral description of real estate objects, since it is present in the database and documents as various files, and GIS also allows you to see the location of any real estate object in space, to determine the influence of some objects on others, as well as to analyze external and internal factors influencing the formation and functioning of the real estate object [9].
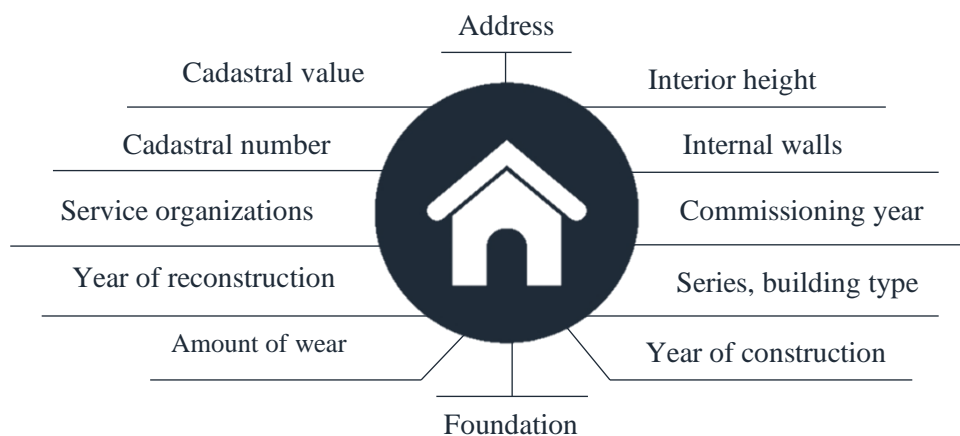
Pic. 1. Real estate e-passport model*

Source: Compiled by the author based on data analysis

In the presented model, the authors show the based information database about the real estate object, based on the needs of the subjects of the real estate market, this model can be supplemented with the necessary data. It should also be noted that some data can be attributed to unchangeable (territorial

location, design and technical parameters, etc.) and changeable (the amount of property tax, cadastral value, technical condition of the object.

Integration of the information system for managing the housing stock with GIS (pic. 2) will allow solving such problems as: inventory and accounting of all real estate objects located on the territory of the state; display of detailed attributive information on real estate objects; providing the necessary information for making management decisions, analyzing the situation on various topics based on the available data; increasing the efficiency of interaction between government services and property owners, etc.
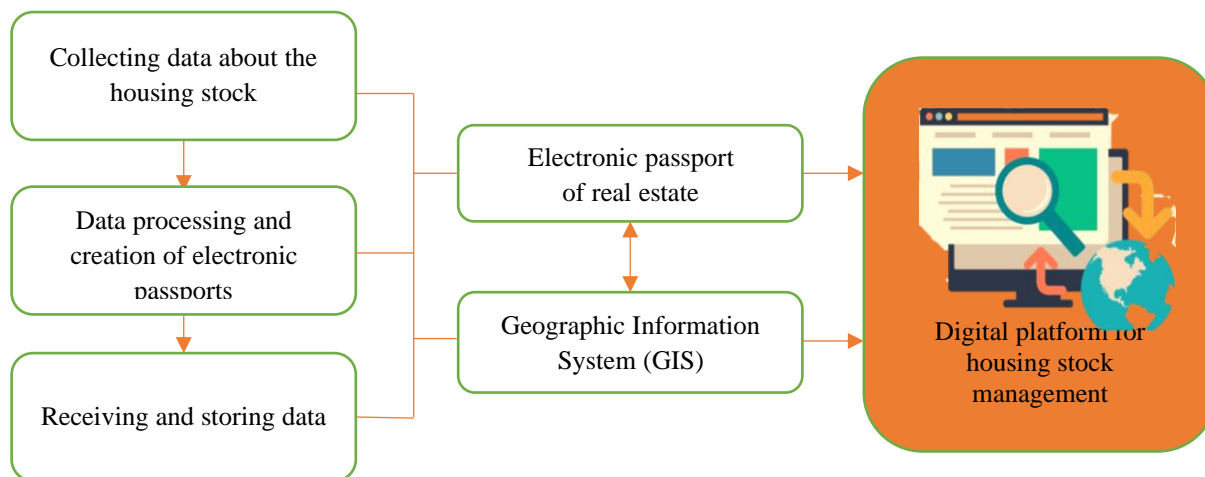
Pic. 2. Scheme of building a unified digital platform for housing stock management *

*Source: Compiled by the author based on data analysis

It is worth noting that the created digital platform for housing stock management will need constant maintenance and support throughout the entire life cycle of the system to ensure its uninterrupted and correct operation.

In the course of the scientific study, constraints were identified that impede the informatization of the housing and communal services industry; these include the different level of informatization of the subjects of the housing and communal services market, the lack of systematic collection of information, the lack of uniform standards and formats for collecting information. The indicated factors are one of the main causes of difficulties and distortion of information at all stages of data collection and transmission [10].

Conclusion

Based on the results obtained, it can be concluded that the information support of real estate market entities is the most important aspect, since it allows to reduce uncertainty and risk, contributing to the implementation of certain goals of the entity, and the following recommendations are proposed to solve these problems:

1. Creation of technological standards, the development of digital platforms in the field of housing stock management and housing and communal services at the republican and regional levels, which would allow the authorities to obtain data on housing facilities on the construction and housing and communal services sector for conducting analytics throughout the country when making management decisions, the possibility of citizens receiving complete and up-to-date information about the house, on the method of house management, on the list of services provided for the management of common property in an apartment building, work performed on the maintenance of common property in an apartment building, current and major repairs, on the management and resource supplying organizations, on payments for residential premises and utilities.

2. The regulatory framework in the field of housing and communal services is largely incomplete, unstable and subject to frequent changes, regulation in the field of digitalization is almost completely absent. Taken together, this creates rather high barriers to entry for independent developers, manufacturers of software, technologies and equipment, which could contribute to the further development of modern technologies in relation to the housing and communal services industry.

3. Further improvement of social and public-private partnership relations (broad attraction of foreign investors mainly in this area), which will be aimed at the effective use of the housing stock of the Republic, in particular, for its repair, maintenance and management, as well as improving the quality of housing and communal services provided to the population and significant cost savings in this area.

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In conclusion, it should be noted that the digitalization of the housing and communal services industry. would allow, first of all, to increase the efficiency of management processes, which in turn leads to a decrease in losses, a decrease in indirect and overhead costs in tariffs, etc., secondly, it would allow to reduce the volume of accounts receivable in the industry, thirdly, ensuring industry transparency for public oversight and regulation, fourthly, improving the quality of the provided housing and communal services by creating elements of market competition in the industry and, as a consequence, reducing tariffs. In addition, this is the creation of conditions for attracting private investment in the development of the industry and, finally, the formation of a database of complete, reliable and up-to-date data in the field of housing and communal services - on the state of the housing stock, on the volume and quality of services provided and energy consumption, on consumers of housing and communal services.

References:

1. Golovenchik, G. G. (2018). Cifrovaya ekonomika kak novyj etap globalizacii. *Cifrovaya transformaciya*, № 1 (2), pp. 26–36.
2. (2020). *Decree of the President of the Republic of Uzbekistan No. 6079 dated 05.10.2020 "On approval of the strategy "Digital Uzbekistan-2030" and measures for its effective implementation".* Retrieved from: https://lex.uz/ru/docs/5031048
3. (2019). *Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 48 of 18.01.2019 "On approval of the concept of introducing smart city technologies in the Republic of Uzbekistan".* Retrieved from: https://lex.uz/ru/docs/4171074
4. (n.d.). *Open data of the state committee of the Republic of Uzbekistan on statistics*. Retrieved from: https://stat.uz/ru/ofitsialnaya-statistika/
5. (2003). *Law of the Republic of Uzbekistan dated 11.12.2003 No. 561-II "On informatization"*
6. Asadova, M. S., & Kakhramonov, K. S. (2020). Blockchain technologies in the digital economy of Uzbekistan. *ISJ Theoretical & Applied Science*, 03 (83), 155-159. Soi: http://s-o-i.org/1.1/TAS-03-83-33 Doi: https://dx.doi.org/10.15863/TAS.2020.03.83.33
7. Artikov, N. Y., & Kakhramonov, K. S. (2020). Methods for calculating the discount rate for the evaluation of the cost of objects making income on the example of the republic of Uzbekistan. *ISJ Theoretical & Applied Science*, 05 (85), 610-614. Soi: http://s-o-i.org/1.1/TAS-05-85-111 Doi: https://dx.doi.org/10.15863/TAS.2020.05.85.111
8. Turdiev, A. S., Kakhramonov, K. S., & Yusupdjanova, N. U. (2020). Digital economy: experience of foreign countries and features of development in Uzbekistan. *ISJ Theoretical & Applied Science*, 04 (84), 660-664. Soi: http://s-o-i.org/1.1/TAS-04-84-112 Doi: https://dx.doi.org/10.15863/TAS.2020.04.84.112
9. Kakhramonov, K. S. (2021). Comprehensive assessment and methods of increasing the efficiency of housing and communal services management in the Republic of Uzbekistan. *ISJ Theoretical & Applied Science*, 03 (95), 173-176. Soi: http://s-o-i.org/1.1/TAS-03-95-31 Doi: https://dx.doi.org/10.15863/TAS.2021.03.95.31
10. Nurimbetov, R. I., & Kahramonov, KH. SH. (2021). *Osnovnie napravleniya sovershenstvovaniya sistemi upravleniya zhilish'nim fondom.* Investicii, gradostroitelstvo, nedvizhimost kak draiveri socialno-ekonomicheskogo razvitiya territorii i povisheniya kachestva zhizni naseleniya: Materiali XI Mezhdunarodnoi nauchno-prakticheskoi konferencii. V 2-h chastyah, Tomsk, 02–04 marta 2021 goda / Pod redakciei T.YU. Ovsyannikovoi, I.R. Salagor. (pp.175-180). Tomsk: Tomskii gosudarstvennii arhitekturno-stroitelnii universitet.

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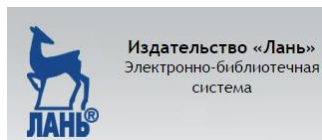
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