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CREATION OF PREREQUISITES FOR INCREASING THE COMPETITIVENESS AND PRIORITY OF MANUFACTURED PRODUCTS AMONG CONSUMERS OF THE REGIONS OF THE SOUTHERN FEDERAL DISTRICT AND THE NORTH CAUCASUS FEDERAL DISTRICT

Abstract: *in the article, the authors analyzed the state of the market of the regions of the Southern Federal District and the North Caucasus Federal District, confirmed the presence of a significant deficit in footwear, which justifies the feasibility of forming a cluster on the basis of shoe enterprises of the regions of the Southern Federal District and the North Caucasus Federal District. At the same time, they were able to form the entire assortment that would meet the needs of consumers in these regions, with the justification that it will be in demand and competitive through the formation of innovative technological processes using a quality management system to ensure quality management, forming its advantage over other manufacturers and ensuring the realization of consumer preferences. In addition, ensuring effective work, the heads of enterprises will significantly improve the socio-economic situation of these regions, filling regional formations with budget funds that are so necessary to provide residents of these regions with decent living conditions for solving their social problems.*

Key words: *quality, portsubstitution, priority, competitiveness, market, profit, demand, buyer, producer, financial stability, sustainable TEP, priority, assortment, assortment policy, implementation, paradigm, economic policy.*

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Introduction

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Quality and the idea of quality are stable phenomena, but time also changes them. Initially, quality was identified with meaning. The criteria for quality were the usefulness and size of the object, the relationship. With the development of consciousness and practical possibilities, the foundations of comparison and choice have developed. Quality is relatively separate from quantity. The differentiation of utility is made, participation is rethought as quantitative features. The evolution of the understanding of quality is directly due to the embodiment of creative potential in activity. The divergence in the intensity of the advancement of individual skill, the interests of those who are called upon to clear the path of talent and mass consciousness complicates the understanding of quality and the process of quality management. Of particular importance is the specificity of the interpretation of quality, in particular, such a basic feature as objectivity. The social theory of being is built on a natural historical basis – its canvas was laid by nature, and the historical pattern was created by man. In the natural environment, all signs, including such synthetic ones as quality, are products of spontaneous movement. In society, every phenomenon passes through activity, includes in its quality the mental and physical labor of a person. Determining the quality of phenomena created by human activity is impossible without socio-cultural concretization. In this regard, two issues are actualized:

- In what status and to what extent consciousness passes into what is traditionally called the quality of things. The answers to both questions must be sought in the philosophical theory of alienation. The theory of alienation is not directly related to the theory of quality. It is the key to the methodology for building a theory of quality.

The trajectory of the process of alienation of human creativity in what exists outside of it must necessarily preserve and activate the ability to create. Unlike the being of nature, the being of man is not substantial. It is not self-sufficient and can take place solely due to the interchange initially with nature, and subsequently with society, through which human relations to each other and interaction with nature are built. The tool that ensures the existence of a person is labor, the highest quality of labor is manifested in activity.

Body

The quality of activity, on the one hand, is an indicator of the quality of a person's life (this is how it should be!), on the other hand, high-quality activity is built into the quality of what he transforms. The quality of the "first" (natural) nature is formed by itself

as a set of objectively related natural features, spontaneously. The quality of the "second" (reconstructed, adapted by man for his own interests) nature is synthetic. It is represented by a double spiral formed by natural signs of natural material (perhaps in human relations, knowledge expressed indirectly) and qualitative characteristics of human activity - knowledge, emotions, will, value orientation, skill. As a result, the quality of the product, unlike the product itself, embodies the quality of the personality.

The personality is alienated in quality and therefore, in principle, alienation is natural and does not oppress the personality. The negative consequence of alienation is caused by the disproportionate compensation of the lost energy of the activity. Having discovered the non-quality of the goods, the hidden defect of production, the deceptive actions of the seller, the normal buyer is upset, first of all, because of his own poor-quality decision. Other losses of the transaction are most often reimbursed. There remains a feeling of imperfection of one's own taste and knowledge.

The quality of everything created by activity includes the properties of activity, both practical and spiritual, in objectified (objective or functional) expression. Hence the conclusion that it is necessary to form and direct the development of the ability of mass consciousness to qualitatively evaluate goods: a certain experience in Soviet times was and showed its effectiveness: "circles", "schools", "universities", including those initiated by television and radio. The place of systemic education of the mass consumer, professional assistance in the development of a culture of qualitative selectivity, today on the air is filled with aggressive advertising, the quality of which is not controlled or control is not commensurate with the size of deception. Who should be the main educator? The manufacturer and only he, because only he fully, according to the logic of the formation of understanding, should know what quality is. To take up the production of goods, without comprehending the concreteness of the quality of this product, means a professional failure in the market. The release of the same product with fake quality is pursued by law, however, formally and after the fact. Suppliers of pseudo-quality goods hope for the latter.

Let's be honest – the problem of quality theoretically remains developed unilaterally, which is not very noticeable, because there is no normal organization of production and marketing of high-quality marketable products. Current practice satisfies this degree of certainty in quality theory. The theory of quality management is simplified to the concept of control over the conditions of quality production, while there is no systematic understanding of what is the quality of goods?

Historically, the understanding of the quality and concreteness of its reality represented in the product reflect the economic and cultural development of

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society. Quality in the days of shop production was determined by the conservatism of the manufacturing technique, but even at that time the municipal authorities strictly checked the quality of products, as well as the abilities of the candidate for producers, there was an official provision approved by the authorities of the city or country. Agricultural products were controlled by the consumers themselves.

The Industrial Revolution simplified the production process, created the conditions for mass production. Adequate quality control measures were required. With the equalization of social architectonics and greater accessibility to the range of goods, ideas about quality changed in the direction of its quality - qualitative components. At the same time, the possibility of quality falsification was formed. Further, both de facto and de jure, there was only a step left to replace branded qualities. Crossing abroad opens the way for legal violations and moral crisis, up to and including the limit.

Were the trends in the interpretation of quality and attitudes toward quality that developed in the economy of mass production inevitable? No, they were generated by a new nature of production, reflected this character and to a certain extent were an objective reflection, but, in addition to the object reflected by consciousness, there is an angle of reflection due to the position of the consciousness of the reflecting subject, his interests as a participant in the processes occurring in objective reality.

Objective reality itself, by definition, is located outside and independent of consciousness. Its reflection is subjective, which, in general, looks in accordance with the theory of reflection. However, it allows, in private, both subjective distortion – involuntary – by misunderstanding, and conscious in order to obtain a temporary gain. Competition is always a struggle, unfortunately, the struggle is not always conducted according to the rules.

Quality is a system of essential properties for a product - it is banal and well-known, which is actively used, replacing the properties or their consistency in a quality product. Essential properties are those that are not just inherent in the product, they determine its functionality. Such properties, as a rule, are revealed in the process of "working" the goods for their intended purpose, they are hidden from the unprofessional view of the consumer. In its "pure" form, the market is an intermediary and there should be no interest in the quality of products. The task of the market in the theory of the organization of commodity production is the organization of exchange between the producer and the consumer. The development of the market stimulates the increase in production in the interests of the consumer within the infrastructural status of the market.

The monopolization of production led to the accumulation of financial capital, the autonomization of the latter and the control of the market. As a result,

the market has turned from an intermediary into a key subject, trying to replace the indicator function - to show the demand for goods - with the role of the organizer of economic activity as a whole, which distorts the system of the economy.

The economy of commodity production was created by the production of the product and the need for a mass product. The system-forming factor here is the production of goods as a product necessary for consumption by others, that is, the process of alienation of consumption. In natural production, the quality of the product was hardly an urgent problem. Quality "dissolved" in the conservatism of engineering and technology, the traditionality of the assortment. The question of quality was raised by the consumer when he got the opportunity to compare at the fair. The market, which grew out of fair meetings, gradually enriched the representative status with an advertising business, taking over the management of the relationship between the producer and the consumer. Management levers – financial policy, directions – influence on quantity and quality.

The quality of the product has gained relevance in commodity production. It became clear that in the understanding of quality there is sensual and rational thinking (the latter in the form of calculation). The subjective factor is objectified and fetishized. The market is not able to influence the objective properties of the product directly (with the help of its own mechanisms), but it can very much affect the objectification of subjective ideas. Thus, the manipulation of quality was first included in the functions of the market, then it became an element of economic policy.

A sound and healthy economic policy is designed to work on improving quality in two interrelated areas: technical and technological, completed by a rigid legal block of support, and socio-cultural - to provide comprehensive support for the formation of conditions for subjective perception of quality, to block the negative effect of advertising influence, which has long and thoroughly become an attribute of market speculation on the importance of quality for the buyer. The availability of choice and solvent opportunities do not serve as the basis for the indisputability of a quality acquisition.

In the existing market, price and quality are diluted even at auctions famous for their thorough organizational culture. The buyer is turned into an expert and this grimace of the market is not as bad as illogical. The market forces the consumer to develop as a person. From a man in the street with a wallet, we, in order not to be suckers, involuntarily try to learn more about the subject of interest, increase our "purchasing qualifications". The term is not new, it is used by journalists, but for them it is a passing, verbal number, and for them it is no longer a new combination of commonwords, but the most

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important concept, without which the modern theory of quality does not have a systemic holistic view.

"Customer qualification" includes, along with certain knowledge that helps to determine the location of the store, the range of prices for the goods, requires the availability of basic information about the manufacturer, the qualitative characteristics of the product, the market reputation of the manufacturer, the traditions of the company, the scale of activities. Today, in the consumer market, the naïve buyer risks, beyond any permissible measure, to be a victim not only of deception, but also of his own carelessness, therefore, without any right to compensation.

The buyer in Russia is protected formally. In real life, you have to be guided by the famous rule "saving drowning people ("buyers") is the work of the drowning people themselves, read "buyers". Improving the "purchasing qualifications", if there is a desire, is a mutually beneficial business for the state, activating the cultural national heritage and the patriotic mood of the mass consumer.

We are able to make quality products and are quite able to regain "our" market. The question is not even in the price, the problem is in the loss of control over the consumer (and not only consumer, judging by the failures in rocket technology, aircraft operation, etc.) market. They explain to us that we need economic measures. Rightly so, though, it's a half-truth. If necessary, then accept. The government should have a non-nominal power. It's time to understand that economics has always been politics, economic theory has always been political economy.

Economic movement is self-movement, but it does not occur in a vacuum. The economy is the basis of the social movement. Society provides the conditions for economic movement, and the state has the right to vigorously engage in the mechanisms of economic self-movement, directing the development of the economy in the interests of society.

It's an amazing thing. When it comes to the future of technological progress, futurologists of various stripes groan that the autonomization of the movement of technology will lead to the domination of robots over humans, and it is better not to interfere in the development of the economy. Who is better for? There is only one conclusion: not to disrupt the self-movement of the economy in the interests of those who privatized the economy and whose service is the "border guards", who prohibit the control of economic processes through politics.

None of the convertible currencies is backed by a quality commodity equivalent and the "free" movement of the currency continues under the guise of politics. Financial self-movement creates favorable opportunities for chaos in the consumer market. The state sluggishly protects the legitimate interests of the national producer, even when the product is the product of interethnic integration. There is no political aggressiveness, politics is dragged in the wagon of the

economy instead of outpacing its development on the basis of objective socio-economic trends.

Domestic producers need a "clear" economic policy. By "intelligibility" they understand: clarity, consistency, guarantee support, which makes it possible to cut off the multifaceted arbitrariness of administrative authorities and "guardians" of order. Everyone is responsible for the quality. Both those who produce and those who are called upon to ensure the rights of producers. The Customs Union has lit the green light on the way of national goods on the market of the Treaty countries. Thus, an equilibrium real market competition has been created, which makes it possible to evaluate the natural, rather than advertising quality.

It is no less relevant to analyze the problem of quality in the coordinate system of the national mentality and interethnic integration. Integration is being deliberately replaced by globalization, despite the obviousness of the difference between these phenomena. Both trends are objective and characteristic of recent history.

Integration is an interethnic interpenetration of various activities of a socio-economic, cultural-humanitarian scale. It can have an interethnic size, for example - "Union State (Rf and RB); local – Customs Union; regional (Shanghai Organization, EEC). Globalization points to the worldwide scale of the phenomenon. Global problems include those that have arisen as a result of common, but not necessarily integration, processes, and require a consolidated solution.

Global problems, unlike problems related to integration, are potentially relevant and have a strategic meaning. For example, how to protect life on Earth from large meteorites. When the time of the onset of the event is postponed, but it itself is super relevant in importance, then speculators, including financial oligarchs, actively rush into the gap, trying to extract a profit from uncertainty.

Quality is related to globalization, but almost not so relevant. With integration, quality is directly related.

Consider the problem of "quality of consumer goods" in the coordinate system "national" and "international". First of all, it is necessary to find an answer to the question: is integration able to supplant the national component of quality?

Integration processes are based on standardization and unified metrological characteristics of production, which corresponds to objective reality. Technological progress is based on science, scientific knowledge is imperative in terms of normativity. However, the existence of the common is not self-sufficient. General requirements are realized through a special development due to the specificity of the circumstances of the action. In other words, no matter how standardized the production of goods is,

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the peculiarity of production conditions will still manifest itself in it.

The concreteness of the conditions – regional, national – is inherently present in the raw materials, climate, traditions, culture of the consciousness of the performers. And in all this, the power of production, which determines the nuances of the quality of the goods, creating a special interest of the consumer in it. Tea is grown in our time all over the world, but the uniqueness of tea plantations in Sri Lanka, the national attitude to tea have ensured the quality of the Ceylon product a leading position. The same can be said about Kenyan coffee, Bulgarian and Chilean peppers, French cognacs and champagne, Ukrainian lard, Bavarian and Dutch beer, Scotch whiskey, Russian flax, Egyptian cotton, Chinese silk, Argentine leather, Greek olive oil and much more. The specificity of the environment should be cherished and preferences for its reproduction should be ensured. The fundamental treaties governing relations in United Europe clearly spell out the priority of national traditions.

The Customs Union consolidates the interethnic division of labor, built in the twentieth century, promotes the expression of the objective and subjective aspects of the development of production, mutually enriches the market, facilitating access to it by producers. But all this is a theory. Theory develops into reasonable practice not only because it is correct. activity makes a theory practice, and in order to get the desired result, the activity must be systematic and consistent.

Interest in the quality of goods, theoretically, should not begin in production. Its initial position is in the normalized market, more precisely at the meeting of the manufacturer and the buyer. A normal market is an indicator of the quality of a product. Demand pulls the production chain, but not the spontaneous demand of abandoned buyers. Demand is a state of consciousness conditioned by purchasing power, but not reducible only to the amount of money, especially when lending is stimulated in every possible way by banks. Demand at the mercy of intermediaries, lobbyists, speculators is a deadly disease for the national producer of Russia. Demand should be taken under control and formed, the buyer should be educated. Educating a consumer costs a lot. But it's worth it if you look to the future.

Market liberalism corresponded to the flourishing of the first type of mass production economy, focused on ensuring free access and choice of goods. Such production perceives the consumer as an abstract subject of relations in the system "producer - seller - buyer". The seller is assigned the role of an active intermediary, but no more than that. It culturally provides a meeting place between the producer and the consumer. The system must be functionally active, which implies not the presence of the components that form it, but their complicity. The perfection of the system design is in the ultimate

realization of the potential of relations that create consistency.

The buyer is perfect as a subject of systemic interaction with his purchasing preparation. It is perfect not the size of the payment capacity. Its complicity is determined by knowledge of the commodity-economic situation. The consumer is not the object of the application of the actions of the seller and the manufacturer. The consumer is a subject of the market and it is in his (and other subjects too) interests to be informed not by the advertising community, but by professional sources. The quality of the goods begins in the mind of the consumer. Imposing the idea of quality is bad for all legitimate subjects of economic relations. It must be brought up again by everyone: the producer, the seller, the buyer himself and the institutions of civil society, if the state is passive.

The transition to mass production of the second type – "smart", "rational" economy activates systemic relations. The function of the market appears in a new light. Together with the manufacturer, the seller focuses on the knowledge of consumer tastes. To improve the system, it remains to make only one, but not an easy, step - the whole world to take up the formation of consumer culture.

Accusing the current generation of consumerism is not entirely fair. Consumption is the ultimate goal of production. The trouble is the lack of consumer culture of the mass consumer, the trouble is really socio-cultural in size. Another consequence of the financing of cultural progress. Why does one government replace another, and culture is still in power last in line for political relevance? It is time to understand that not only science has become a direct productive force. Culture is also a factor in the development of production, moreover, a multifaceted and very effective factor. It is known that the concept of competitiveness can be applied to various objects: documentation of technology, products, production, etc. of all categories of competition philosophical, social, psychological, market, economic, market and economic significance for production are of unconditional importance for production, since they characterize its ability as a complex open organizational and economic system to predict its future, produce specific products and provide at the expense of this is a profit sufficient for normal functioning and development. The competitiveness of the enterprise is determined by external and internal factors. Factors of competitiveness of the organization, determined by the external environment, are elements that must be taken into account when forming the flexibility of the production system of any kind, but in the future only the influence of internal competitive advantages is considered.

Market and economic categories of competitiveness of enterprises and industrial products produced by them are studied in detail in the works of

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M. Porter, J.-J. Lambena, W.J. Stevenson et al. Thus, M. Porter singles out as innovations that allow creating a competitive advantage of production or its products new technologies, new or changed customer requests, the emergence of a new segment of the industry, a change in regulatory regulation, a change in the cost or availability of production components. At the same time, changed customer requests, the emergence of a new segment of the industry, a change in government regulation, a change in the cost of the components of the production belong to the classification of J.-J. Lamben to external factors that do not affect the costs of production itself.

The actions of buyers are manifested in completely new requests or their estimates change dramatically, which serves as an impetus for the design and release of new or modified products. The emergence of a new segment of the industry allows you to reach a new group of buyers. Changes in the cost of components, changes in government regulation, undoubtedly, are factors of external influence on production efficiency. Then the changes in the components of production and new technologies identified by M. Porter should be considered as the reasons why internal factors of the competitive advantage of the enterprise appear. Indeed, changing technologies are creating new opportunities for the development and production of goods. For the existing production, the replacement of the entire technological process is an expensive measure, and the improvement of individual stages provides real opportunities for increasing the level of competitiveness of the enterprise. In any case, updating the technology is almost always associated with additional costs. W.J. Stevenson proposes to form the competitive advantages of the enterprise through price, quality, specific features of goods or services (production or service orientation), mobility (flexibility) of production, time or timing of processes (timing of certain operations). Of these factors, the internal factors include price, quality, flexibility of production, time and timing of the processes of manufacturing finished products. The quality of products, the flexibility of production and the duration of processes are determined mainly by the technical and organizational level of the enterprise. At the same time, there is a clear impact of flexibility on the price of products and the duration of its production cycle. Indeed, flexibility provides a rapid restructuring for the production of a new range of products, which leads to a reduction in the duration and costs of its production. R.A. Fatkhutdinov proposes to take into account structural, resource, technical, managerial and market factors as internal factors. Structural factors formed in the design of an organization include:

- production and organizational structure of the enterprise;
- the mission of the organization;
- specialization and concentration of production;

- accounting and regulation of production processes;
- information and regulatory and methodological framework of management, etc.

Resource internal factors to achieve a competitive advantage of the organization are associated with the specifics of relationships with suppliers, taking into account and analyzing all types of resources, with functional and cost analysis of products, optimizing the efficiency of resource use, etc. Technical factors of competitive advantages of the organization are realized through technical innovations, including: possession of patent novelty or know-how of products and technologies, increasing the share of products and technologies progressive technological equipment and the reduction of its average age. Managerial internal factors of the competitive advantage of the organization: these are the managers themselves, the level of their qualifications, as well as the functioning of management systems, information support for decision-making, quality management in the organization, etc. Increasingly fierce competition in the international market of consumer goods poses new problems for the footwear industry. This is the problem of criticality of the time required to create a product and organize its sale, and improving the quality of design and production processes, and problems associated with competition in the maintenance market, and problems associated with direct cost reduction (direct capital; remuneration in production).

The results of the study in the field of the state of shoe enterprises in Russia and the Southern and North Caucasian Federal Districts, in particular, showed their inability to cope with the growing difficulties from the external and internal environment. Having embarked on the path of transition to market relations, shoe enterprises faced a crisis of their economic systems. The old directions in the management of a shoe factory, born in the internal environment (organization of production, reduction of costs, efficiency of use of all resources, increase in labor productivity, etc.) do not give a way out of the current situation. It is necessary to develop and use new approaches in the field of economic management of the enterprise, including marketing and the development of the competitive status of the enterprise, which facilitates adaptation to the external environment.

Thus, the success of a shoe enterprise depends on how quickly the threat to its existence is identified. This once again confirms the main conclusion of the study of the state of shoe enterprises that their adaptation to the external environment with the unconditional importance of the internal environment should become paramount and manifest itself in strategic forecasting and flexible development of the enterprise. It is important for shoe enterprises to be

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able to orient themselves in the use of the achievements of scientific and technological progress in order to identify new trends in time, work out the concept of development of these achievements for specific production conditions, prepare for their implementation and ensure implementation.

The flexibility of the enterprise is the ability of the enterprise to obtain the necessary result, which allows it, without a radical change in the fixed production assets, to master for a certain period of time a natural (necessary) number of new models of shoes that can be in demand by the market and, in turn, allow in the future period to obtain the necessary result that ensures the survival and development of the enterprise. The structure of shoe production is quite complex and is distinguished by a variety of raw materials and finished products. A feature of the shoe industry is the frequent change of production facilities (assortment). The design of new samples of shoes involves the development of technological processes for their manufacture. This work should be carried out in a short time and with minimal costs, and the optimal production option is chosen, because at the design stage of the technological process, the intensity of the enterprise's functioning is predetermined, i.e. the possible level of technical and economic indicators of its work. At the design stage, the foundations of product quality are also laid, because its properties largely depend not only on appearance, functional purpose, compliance with fashion, etc., but also on the manufacturing process.

In this regard, it would be more correct to talk about the need to create a structural model of shoe production, which would ensure the functioning of a flexible technological process with the mandatory implementation of the main requirement - ensuring the manufacture of shoes in an assortment that meets the needs of the market and implements the requirements of competitiveness. A generalized structural scheme of flexible development of a shoe enterprise is presented in Figure 1. The structural model of shoe production will also be effective if the behavior of the proposed range of shoes in its "life" is taken into account, i.e. all stages of the product life cycle (LCI) will be implemented:

- marketing and market research;
- design and development of technical requirements for the created products;
- logistics;
- preparation and development of technological processes;
- production;
- control, testing and surveys;
- packing and storage;
- sale or distribution of products;
- installation, operation;
- technical assistance in maintenance (repair, etc.);
- disposal after the end of use of the product.

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Figure 1. Generalized structural scheme of flexible development of the shoe enterprise:
D - mathematical dependence, which provides a scheme for the development of a flexible technological process for the manufacture of the entire range of shoes;
γ - resistance (result) to renewal in different cycles of development of this production;
C- the ability to update in different cycles of development of this production

A distinctive feature of light industry is a short life cycle of products, since the clearly defined desire of people for individuality in clothes, shoes, accessories causes the need to produce a wide range of products. This leads to frequent changes in product models, a decrease in the size of manufactured batches and an increase in the frequency of their launch. The organization of a large assortment of footwear production with the maximum use of the capabilities of the equipment used, labor resources and production areas and the possibility of periodic change and renewal of shoes with minimal expenditure of funds and time to organize its production are the main requirements for modern shoe production.

In general, the average production time of a unit of production T_{EP} is determined by the average time of execution of operations T , the average value of the preparation for the launch of the corresponding batch T_Z , the average production preparation time for this model T_{PP} , the average number of batches of

manufactured products for the life cycle B , the average value of the batch A . The expression for the definition of T_{EP} is as follows:

$$T_{EP} = T + T_Z/A + T_{PP}/AV. \quad (1)$$

The time of preparation for the launch of a batch of T_Z includes labor costs for the selection of materials, adjustment of equipment, planning the production of a batch of products, etc. and is calculated at a time for each batch. The time of preparation of production of T_{PP} includes: model selection, design, technological preparation, cost calculation, pricing, production planning, which are calculated in the same way at a time, but for the entire production program of this model.

In the shoe industry, there is a concept of a basic model, for which the main design and technological developments are carried out, specified for working models, the so-called model features. In this regard,

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the concept of the conditional life cycle of the base model overlaps the life cycles of the working models (Figure 2).

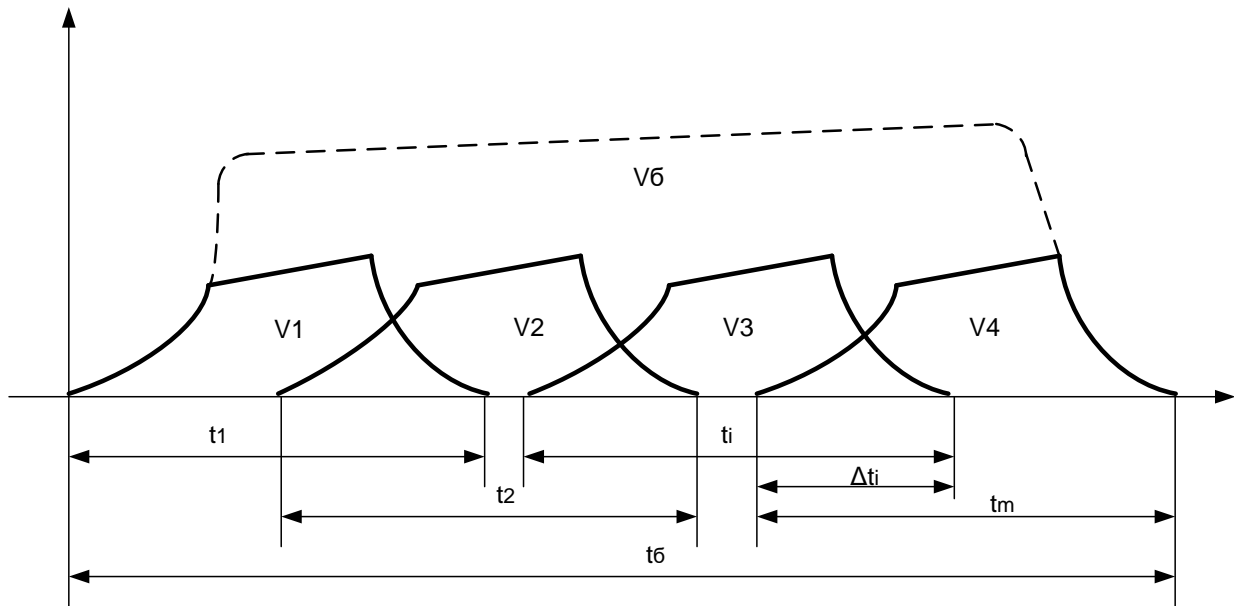


Figure 2 - Relationship of the life cycle of the base model with the life cycle of the working models

Obviously, the total volume of production of products based on the basic model V_b will be determined as:

$$V_6 = \sum_{i=1}^m V_i, \quad (2)$$

where V_i is the production volume of the i -th working model;

m – the number of working models produced on the basis of the basic one.

In turn, you can write:

$$t_6 = \sum_{i=1}^m t_i - \sum_{i=1}^m \Delta t_i, \quad (3)$$

where t_b is the conditional life cycle of the base model;
 t_i is the life cycle of the i -th model;

Δt_i is the time of combining the life cycles of working models.

When launching n models per year on the basis of k , the basic total labor costs for the production of products will be:

$$\sum_{i=1}^n T_{EP_i} = \sum_{i=1}^n T_i \cdot A_i \cdot B_i + \sum_{i=1}^n T_{3_i} \cdot B_i + \sum_{j=1}^k (T_{III6_j} + \sum_{x=1}^l \Delta T_{IIIp_x}), \quad (4)$$

where T_{III6_j} is the production preparation time of the j -th base model;

ΔT_{IIIp_x} – change in the production preparation time of the x -th working model based on the j -th baseline;

l is the number of working models released on the basis of the j -th base. The influence of the components of T_Z and T_{PP} on total labor costs is determined by the level of seriality. With a small serial production, the value of total labor costs is significantly influenced by the second and third components of the formula (4) determining the average time of production of a unit of production T_{EP} .

They become comparable in size to the first component, since they are one-time and are distributed to a small number of batches and products in each batch. Therefore, changing the average time of the main work operations performed cannot significantly affect the total work costs. Hence it becomes obvious that with a small serialization of the level of automation and specialization of the equipment, it is impossible to significantly change the labor costs. This corresponds to the internal structure of a small enterprise.

In mass and large-scale production, the change of models during the year is relatively small, i.e. products are produced in large batches and for a long time. Enterprises of this type, basically, produce

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specialized shoes, which have practically no product variability (for military personnel, etc.). In this case, the second and third components do not have a significant impact on the total launch preparation time and the production preparation time is distributed over a large number of products. The average time to complete operations has a decisive effect on total work. Based on this, the choice of equipment and the qualification composition of the personnel should be carried out.

The implementation of the concept of flexibility becomes possible with the rapid execution of various volumes of orders from small-scale, almost single, to orders with a significant seriality, for example, with the level of medium-series production. This entails the need not so much to reduce labor costs for the preparation of production and the preparation of the launch of batches, but to reduce the time of these preparatory works. Therefore, the technological process of manufacturing products should be easily reconfigurable. Hence the unconditional use of quickly adjusted and sufficiently specialized and automated equipment. The qualifications of operators and maintenance personnel must be comparatively high to ensure the high performance of each in different workplaces. Flexibility should be ensured not only in the technological process, but also in all personnel. In this case, all three components of the average production time become significant and manageable. A description of the requirements for increasing the flexibility of the functioning of shoe production in conditions of frequent changes in the assortment is shown in Figure 3.

Due to the large volumes of products and the small number of models produced, the principles of flexibility in application to mass and large-scale production are not significant. As for small-scale and single production, it is already flexible in its internal organization. Consequently, the concept of flexibility is significant for medium-series production, in which a wide range of models are produced with sufficiently large volumes.

For the successful operation of enterprises, a high level of updating the range of shoes is necessary. The main objects of renewal are the means of labor (equipment, tools, objects of labor, basic and auxiliary materials, components), production technology, organization of production and labor and, finally, the shoes themselves. The renovation of the first three objects is directly reflected in the update of the range of shoes. A significant role in updating the range of shoes is also played by socio-economic factors: the level of income of the population, the degree of saturation of the market with footwear, consumer

demand and fashion. Under the influence of fashion, not only the shape of the shoe, the number of parts and their location change, but also the nature and methods of processing the parts and their connections, the finish, the materials used, etc. The factors determining the update of shoes are shown in Figure 3.

Directions for updating the range of shoes are determined by various options for combining factors. Thus, under the influence of scientific and technical factors, the production of new shoes is possible using new technology on existing equipment using previously used or new materials, using the current technology on existing equipment using new materials, using new technology on new equipment, etc.

The renewal of production is of a chain nature. Thus, a change in technology is usually accompanied by a complete or partial change in the design of shoes; the introduction of new equipment requires improvement of technology, and the latter is associated with the design of the product.

The great variability of socio-economic factors of product renewal, as well as the influence of socio-economic factors, make it possible to distinguish three types of updating the product range that are characteristic of shoe enterprises.

The first type of updating the range of shoes is characterized by the introduction of fundamentally new products in terms of design and technology, previously not produced at any enterprise and are the result of research and design work. These products are distinguished by new consumer properties and technical and economic indicators, because they are produced using new technology using new materials based on nano technologies and on new equipment using innovative technologies.

The second type of updating the product range is characterized by the fact that the company creates modifications of previously manufactured products to extend the maturity phase of their life cycles.

The third type of updating the product range is characterized by the development of the production of fashionable novelties and high-quality products, fashionable elements of shoe top designs, fashionable styles of pads, new types of materials, the production of especially elegant shoes in small series. This type of update also includes a seasonal change in the product range.

The third type of updating the range of shoes is most closely related to the change in fashion, it contributes to the growth of the competitiveness of the enterprise and the formation of a positive innovative image.

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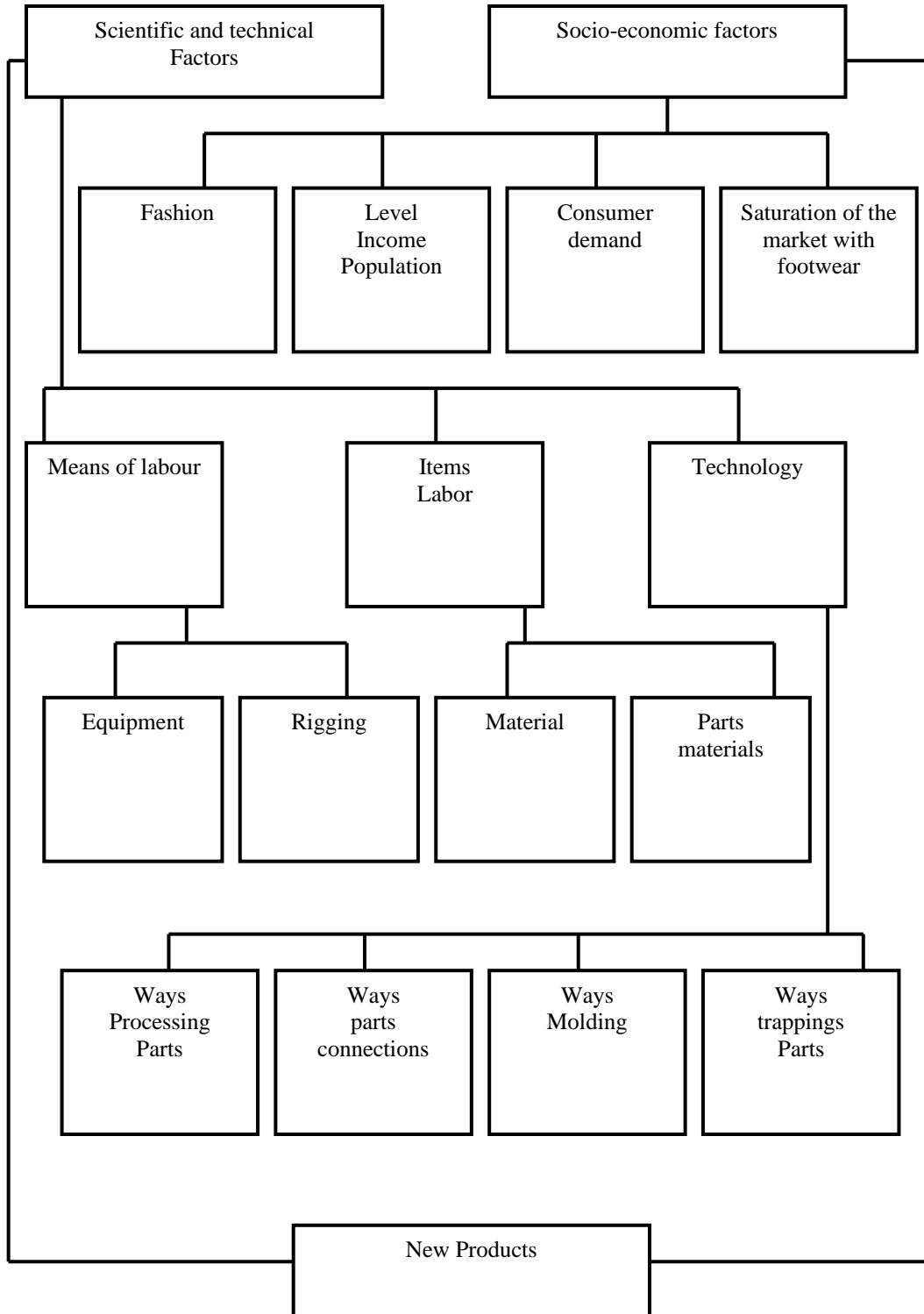


Figure 3 - Factors determining the appropriateness of updating shoes

Each of these types of updating the range of shoes is characterized by its complex of works, organizational characteristics, duration of development, etc. Each type of update also has its own time intervals, within which the chosen direction of updating is relevant. After a certain time, new, more progressive technological, technical and design

solutions appear, so the release of products based on previous solutions will lead to a decrease in the technical and aesthetic level and deterioration of economic characteristics; such products of the enterprise will not be in demand among consumers.

To solve the problems of domestic shoe enterprises related to the renewal and expansion of the

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range of products, the organization of the production of products that meet the requirements of consumers, research is needed in the field of managing the development process and launching a new range of products.

Management of the assortment of shoes is an impact on the processes of development, formation of the composition and structure of manufacturing and sale of products in order to maximize the satisfaction of consumer demand with high technical and economic indicators of production.

The development and implementation of control actions aimed at meeting the demand of consumers for footwear should be carried out within the framework of the shoe assortment management system.

If we take into account that the control actions are carried out through various kinds of activities, then under the subsystem for managing the range of shoes can be understood as a set of interrelated organizational, technical and social measures for the development, formation of the composition and structure, manufacture and sale of products in order to maximize the satisfaction of consumer demand.

Among the main functions of the shoe assortment management system are the following:

- formation of the composition and structure of products;
- organization and operational regulation of production in order to quickly switch to new models and master the necessary production volumes;
- organization of product sales.

In addition, the system performs the functions of collecting, processing and preparing the information necessary for the implementation of basic functions. These include:

- analysis of manufactured products;
- analysis of the assortment policy of the main competitors;
- putting forward proposals on the feasibility of producing a new type of product and removing from production non-demand types of products;
- analysis of consumer attitudes to new types of products.

An important criterion for the competitiveness of shoes in the market is its value with the corresponding quality, as well as the purchasing power of the population.

The instability and dynamism of the external environment force enterprises to abandon the method of long-term planning based on extrapolation of existing conditions, and switch to management methods based on anticipating changes, setting tasks for the development of the enterprise.

Despite the individual nature of the market research conducted by a particular footwear company, the following separate but interrelated and complementary studies should be carried out in the process of comprehensive market research:

- filling with goods;
- the market and its segmentation;
- customer behavior and consumer demand;
- analysis of competition conditions;
- forms of sales activities and measures to generate demand and stimulate sales.

Market research is conducted using a rich arsenal of various analytical methods, including questionnaires, various surveys, methods for analyzing patent information, methods of system dynamics, correlation-regression analysis, etc.

The main task of developing a marketing (market) strategy is to ensure sustainable commercial success of the enterprise, the effectiveness of product sales for a long period of time.

The market strategy is determined by demand factors, the level of competition and the overall market situation and should ensure the possibility of realizing the existing and potential advantages of the shoe enterprise.

The availability of high-quality, competitive goods is a necessary prerequisite for the highly efficient functioning of the enterprise. From this point of view, marketing can be considered as a system of measures for the mutual adaptation of the product and the market in order to achieve sustainable commercial success by the enterprise.

In the theory of marketing, a product is a means by which you can satisfy a certain need, i.e. a complex of useful properties of a thing. Thus, F. Kotler, a well-known specialist in the field of marketing, identifies the following components of the product, grouping them into three levels.

The first level is the fundamental characteristic of the product - its functional purpose, i.e. the idea or intention of the product.

At the second level, the product in real performance has a number of characteristics that just form the second level of product characteristics. These are characteristics such as the level of quality, specific design, brand name, packaging.

And, finally, the third level is a set of additional services offered together with the goods: after-sales service, warranty system, terms of delivery and payment for the goods, accompanying documentation and the so-called "image" of the goods, i.e. the image of the product and the image of the manufacturer of this product from the consumer of the product.

Solving problems related to the development of new products causes, first of all, the need to clarify and clarify the economic meaning of the concept of "new products". The art of planning an assortment of shoes consists in the ability to embody existing and potential technical and material capabilities in products that bring profit to the manufacturer, have a consumer value that satisfies the buyer. Assortment planning begins either from the moment of identifying needs, or from the moment when, as a result of market research or on the basis of other information, a basic

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idea of the product has been formed. Regardless of the source of origin of the idea of a new product, it is necessary to conduct market research earlier or later to find out whether the conceived product meets a conscious or as yet unconscious need.

When forming the assortment policy of shoe production, it is necessary to take into account intra-production opportunities that allow to diversify the range, satisfy the consumer and take into account the risk of non-demand for goods. Network schedules for assortment planning, which can be developed at enterprises, allow you to determine the time from the moment of the appearance of the product concept to the start of its implementation in the region, while widely observing the sequence of stages included in the planning of the assortment. The duration of the entire cycle can be reduced, but subject to the involvement of additional resources and the application of additional efforts at critical stages.

Highlighting the main characteristics of the product is of fundamental importance, because they determine the directions of creating a new one. To make a new product, sometimes it is enough to change at least one characteristic. Here it is important to consider those signs of goods, the difference in which leads to differences in the marketing activities of enterprises.

The formation of an assortment policy based on the planning of the product range is a continuous process that continues throughout the entire life cycle of products, starting from the moment of the birth of the idea of its creation and ending with the withdrawal from the product program. The creation of a new product is a complex design task associated not only with achieving the required technical level of the product, but also with giving its design such properties that provide the maximum possible reduction in the labor costs of materials and other means for its manufacture, but at the same time meet the requirements of customers.

At the same time, it should be borne in mind that all production areas are included in the work in a certain technological sequence, which depends on the technological complexity of the new product and the duration of certain operations, as a result of which a new order of operations is created. Due to the lack of production skills of workers when performing new operations, there is a decrease in labor productivity and the quality of work in the first days of production of new products, i.e. during their development. The design of a product of the proper level is associated with the need to have criteria for assessing its results. As such, indicators of the manufacturability of the design can act.

Of significant importance for increasing the productivity of designers, reducing the number of similar models and low-quality products in the footwear industry is the development of principles and methods for performing design work, including

creative ones, related to the analysis of analog models, the initial conditions for the formation of requirements for the product, the preparation of technical proposals and the choice of the best, the assessment of the quality of the product. Modern requirements for the organization of the process of developing new models of shoes clearly show the shortcomings of the methods of analysis, analysis and justification of decisions, inflexible and insufficiently coordinated with each other, based on the experience and intuition of the designer.

Designing shoes for various purposes is a traditional field of engineering work, in which considerable development experience has been accumulated. Therefore, the design of shoes involves the use of previous experience, which is concentrated in recommendations for the choice of the main design solutions, descriptions of previously designed models, typical design techniques. When analyzing analog models, it is necessary to:

- to study fashion trends in the development of shoes;
- conduct a qualitative assessment of analog models - compliance with the specific purpose of the designed model, ergonomic compliance, perfection of the compositional solution.

Obtaining high-quality projects of shoe models largely depends on the quality of the analysis of possible options for solving the design problem, establishing the feasibility of designing a new model. Many firms strive to improve the efficiency of the mechanism for developing new products, realizing that there is a complete relationship between the success of new products and the financial well-being of the enterprise.

The creation and introduction of new products to the market contains significant elements of risk. Research data show that out of 58 serious ideas for new products, only four are fully developed, two are introduced to the market, only one succeeds. In addition, many new products are unsuccessful already in the market: 40% - for consumer goods; 20% - for industrial goods; 18% - for various services, i.e. there is a high degree of market uncertainty.

The search for ideas about new products should be carried out systematically, and not from time to time. The main sources of ideas for creating new products are:

1. Fundamental (aimed at obtaining new knowledge and indirectly leading to the emergence of ideas for new products) and applied (purposefully using scientific methods to develop ideas about new products).
2. Observations of related products at exhibitions and fairs.
3. Reports and offers of sales agents, sellers, dealers.
4. Trends in the development of new products by competing firms.

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5. Supplier Information.
6. Expert opinions.
7. Information in patents, catalogs, advertising messages, etc.

Identifying the shortcomings of the products also allows you to form new ideas for its improvement. Upon completion of the development of a new product and the creation of prototypes, preparations begin for the final stage - production and marketing. The most effective method by which you can assess the chances of success of a particular product is the trial (experimental) sale of small batches of the product in a controlled market in real conditions of competition. Trial sales are designed in practice to check the demand for a new product for the market and work out the technique of its sale. This makes it possible to reduce the risk in the organization of commercial production.

Positive results of testing new products on the market are the basis for the beginning of the final stage of the process of implementing the idea into a specific new product - the stage of its production development. A detailed plan for the production of a new product is developed: sources of supply of materials, components, equipment are investigated, working drawings are prepared, and products are launched into production. All stages of creating a new product should be carried out in a short time. Shorter lead times increase competitiveness, as the cost of a new product must pay off before it becomes obsolete and loses demand due to the emergence of new competing products on the market.

Any product, regardless of the degree of its novelty and quality, goes through a certain life cycle. Knowledge of the features of the product life cycle is a necessary condition when working with the assortment. Thus, shoe enterprises should focus on both external (consumer enterprises, competition, market situation, 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 the situations that may arise when selling shoes, i.e. some models of shoes at a certain stage are not in demand. In this case, another, usually unpublished side of marketing should appear: if 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 residues, attract a large number of consumers, stimulate the consumption of shoes, using discounts for this. There are about twenty varieties of discounts, but for shoes the most common are such types of discounts that are used at various levels of the enterprise, sales organizations, trade.

In addition to the use of discounts, the company can take an initiative to reduce the price when

underutilizing production capacities, reducing market share under the onslaught of competition from competing enterprises, etc. In this case, the company 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, contributes to increasing the 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 are reduced, 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 of consumers.

With the transition to a new economy, improving the quality and competitiveness of leather goods has become a strategic task of all leather and footwear enterprises of the country and the region as a whole, there is a need to take into account the laws and requirements of the market when working, to master a new type of economic behavior, to adapt all aspects of their activities to the changing situation, changes in consumer demand should be taken into account with the protection of the interests of consumers before industry. The fulfillment of these tasks is possible only on the basis of in-depth study by manufacturers of domestic footwear products, the needs of hotel groups (consumer segments), methods of quality examination and competitiveness of shoes. The current situation in the footwear industry of the Southern Federal District and the North Caucasus Federal District is not least the result of the inability of many heads of shoe enterprises of the Southern Federal District and the North Caucasus Federal District to quickly adapt to the new requirements put forward by the market, to the competition from Russian and foreign manufacturers. Therefore, the current situation led to the development of a strategy for the development of production of competitive leather products in the Southern Federal District and the North Caucasus Federal District.

Issues related to the development of domestic footwear production in the Southern Federal District and the North Caucasus Federal District were considered. As a result of the work carried out, favorable conditions have been identified for the implementation of the strategy for the development of production of popular and competitive products, namely:

- a large concentration of skilled labor;
- coordinated specialization of manufacturers;
- long-standing traditions of shoe craft;
- a small number of local suppliers of high-quality raw materials, component materials;

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high demand in the Southern Federal District and the North Caucasus Federal District for high-quality shoes.

We believe that for the development of domestic producers of competitive and popular products, it is necessary:

increasing the investment attractiveness of the industry;

creation of conditions conducive to improving the supply of material and raw material resources to the industry;

protection of the internal market from illegal trafficking in goods;

export promotion;

legalization of preferential taxation of producers;

development of an interconnected system of supply-sales, production-technological and innovative, pricing, financial, personnel policy and personnel management;

improvement of quality and design of products;

combining the efforts of all manufacturers to promote the region's footwear;

development of a set of measures of regional importance aimed at improving the socio-economic situation through the creation of new jobs;

study of the life cycle of products and the application of advertising and media;

strengthening control and implementation of modern ISO quality management systems, development of dealer and commodity distribution network;

preferential lending within the framework of targeted federal and regional programs ("Family", "Children", "Motherhood");

expansion of the practice of leasing schemes;

with increased commercial risk and in conditions of uncertainty, it is advisable to use outsourcing.

In accordance with the strategy, a competitive range of men's, women's and children's shoes was developed, taking into account the factors affecting consumer demand: compliance with the main fashion trends, economic, social and climatic features of the regions of the Southern Federal District and the North Caucasus Federal District. Within the framework of the developed strategy, the production of competitive products will be organized using modern mechanized innovative technological processes, as well as footwear to meet the demand of elite consumers using manual labor.

Innovative technological processes have been developed 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 thereby increasing its competitiveness, produced by the world's leading companies, with the possibility of a wide range of footwear production not only by types, but also by fastening methods.

Layouts of technological equipment are proposed, on the basis of which it is possible to form a technological process for the production of men's and women's and children's shoes with optimal capacity, regardless of the production area and the form of production organization. An algorithm for calculating the receipt of funds from the operating activities of shoe enterprises is given. Calculations were carried out on the basis of an assessment of 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 and developing measures for their development, which should be aimed at accelerating the turnover of products and reducing losses, which will achieve a significant economic effect.

The results of the sale of shoes during the month at various volumes are considered, namely: 100%, 80%, 50%. The results of the calculations indicate that with 100% of the sale of shoes, compensation for costs is provided not only for the production and sale of shoes, but also a net profit of 1900.54 thousand rubles remains, which indicates the effective operation of the enterprise, as well as the correct marketing assortment policy of the enterprise. A profit will also be made when selling 80% of men's, women's and children's shoes. When selling only 50% of shoes from the production volume of the enterprise will incur losses, that is, this option will already be considered unsatisfactory and the conditions for the sale of shoes in the established period of time of at least 50% are necessary. In the event of such a situation, it is necessary to attract borrowed funds to cover costs and organize the subsequent release of products through the use of bank credit, factoring, leasing.

Based on the current situation in the economy of our country, in our opinion, an equally significant problem in the development of the regional consumer market is the lack of a full-fledged regulatory framework that ensures the functioning of the mechanism of state regulation of the consumer market of the regions. Proceeding from this, it is federal and regional intervention that should correct the situation in the domestic footwear market in the regions through the development of the production of competitive and popular leather products. The analysis allows us to propose the following trend in the development of shoe production in the Southern Federal District and the North Caucasus Federal District:

1. Due to the high level of migration of the able-bodied population in the Southern Federal District and the North Caucasus Federal District to developing industries, the footwear industry of our districts can rightly be called developing.

2. In the Southern Federal District and the North Caucasus Federal District, close attention is justified

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on the issues of quality provision of the industry with qualified specialists engaged in the leather and footwear industry (a large number of specialized educational institutions for training personnel). An important factor is the increase in the investment attractiveness of the industry, especially on the part of regional authorities, the creation of conditions for increasing its competitiveness and attractiveness. It is necessary to introduce high duties on imported imported ready-made shoes and low ones on imported basic and auxiliary materials and equipment, and it is also necessary to regulate the level of prices and tariffs that would guarantee the manufacturer and trade as a whole reimbursement of costs and the accumulation of funds for its modernization and improving the efficiency of the results of their activities.

Thus, the prerequisites for the development of production of competitive products in our regions are significant and relevant, which implies the implementation of a set of the following measures:

1. Creation of regional programs for the development and support of domestic shoe manufacturers in the Southern Federal District and the North Caucasus Federal District (loans, investments, leasing, outsourcing).

2. Development of a modern raw material base of the domestic industry.

3. Stimulation of the tax system for the modernization and reconstruction of existing shoe production and the creation of new competitive industries.

4. Improvement of financial condition and re-equipment of at least 50% of fixed assets.

5. Taking measures to reduce imported footwear in the region and improve the quality of products with exports to 35%, which will ensure the suppression of trade in smuggled and counterfeit shoes.

6. Recognition by the Government of the Russian Federation of the light industry as a priority among other industries and the adoption of a program for the "breakthrough" development of the industry for the period. until 2025

7. To ensure a doubling of industrial production and production of footwear to 85 million pairs by 2025.

8. Competent development of marketing policy for regional shoe productions with a guarantee of better promotion of domestic footwear products in local markets and intensification of media work at the federal, regional and municipal levels to raise the image of Russian shoes.

The implementation of the planned measures will lead to covering the deficit on all types of footwear, will ensure an increase in labor mobility in the Southern Federal District and the North Caucasus Federal District and reduce negative processes in the labor market, as well as a stable balance of interests of

employees, employers and bodies of municipal, regional and federal branches of government.

In our opinion, for the successful implementation of all of the above measures, the interest of municipal and regional branches of government in the development of leather products production, reducing prices for components and **energy costs** and, no less importantly, convenient and profitable transportation of them is most necessary. Thus, all this together will provide our enterprises with a great future and a stable position both in the domestic, and in the markets of near and far abroad. All that is needed is the coherence and interest of all participants in this association. Modern market relations dictate the need to increase the competitiveness of the product by introducing new or improved goods and services into production through the use of innovative, design and technological solutions.

Market research, the need for timely updating of the assortment require the introduction of flexible automation as a priority area of innovation. In other words, complex flexible automation with the widespread use of information technologies and computer systems is the core of the effectiveness of their innovative activity.

The specificity of shoe enterprises obliges to have functionally complete operational, regulatory and information support for the design and technological preparation of production. Currently, the weakest point of enterprises is the low level of information support for technological preparation of production. The Chamber of Commerce and Industry is a very time-consuming process that requires a lot of time. The labor intensity of technological training in relation to the total labor intensity of the technical design of the product in a single production is 20-25%, in serial production - 50-55%, and in large-scale and mass - 60-70%. This is due to the fact that if you move from single production to serial and further to mass, then the degree of technological equipment increases, and consequently, the volume of work on the CCI increases.

The lag in the level of automated systems of technological preparation of production (CAM) from the systems of computer-aided design of design works (CAD KR) is explained by several objective reasons, the most significant of which are that CAD kr are universal, can be used without significant adaptation at almost any enterprise; CAM, on the contrary, are specialized and depend on the nature of production, the type of product. In addition, the CAM is heterogeneous in purpose, it is formed from a set of products, each of which provides the development of a separate type of technological processes. The work of scientists from the leading universities of our country is aimed at automating the CCI of leather goods, assembling the blank of the top of shoes, choosing materials, program designing the optimal

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layout of technological processes of shoe factories, but the issue of automated selection of the technological process of assembling shoes not yet given enough attention. Therefore, there is a need to create information support based on a universal database, in order to reduce labor intensity and increase the efficiency of work at the stage of technological preparation of production through their use. In modern conditions of a market economy, with a rapidly changing demand policy, there can only be those enterprises that are able to correctly respond to changes in market conditions and timely orient their products in accordance with them. For shoe production, such a reaction consists in a quick and frequent change of assortment, which is associated with the preparation of the corresponding production process for functioning in the enterprise.

An important place among the components of the technological preparation of shoe production is occupied by the design of technological processes, the current design of technology "manually" requires a large number of performers, their high qualification and significant time costs. Solving technological problems, specialists proceed mainly from their own practical skills, which entails a subjective approach to design, reducing its quality. Depending on the knowledge, experience and analytical abilities, the technologist can form new installations in different ways and combine them in different ways, as a result of which different technological projects are prepared

on the basis of the same initial information about the properties of the shoe. Thus, the purpose of the study is to reduce labor costs and improve the quality of technological preparation of production by creating an automated system for designing technological processes for the production of competitive and popular shoes. The choice is due to the fact that:

First, in the survey of the automated choice of the technological process of assembling shoes, not yet enough attention has been paid. Until now, the work of scientists from the country's leading universities has been aimed at automating the Chamber of Commerce and Industry for leather haberdashery products, choosing materials, cutting shoe materials, assembling shoe top blanks, and the technological process of assembling shoes, from the point of view of its analysis, synthesis and functioning within the production process, is the most an unexplored area;

— Secondly, the adhesive method of fastening is currently the most common and popular among shoe manufacturers (Figure 4).

The advantages of the adhesive method of fastening include: high labor productivity, simplicity of equipment, wide possibilities of mechanization and automation of the gluing process, product flexibility. An important advantage of the adhesive method of fastening is its versatility - the ability to create any structure from materials using adhesives used in the industry.

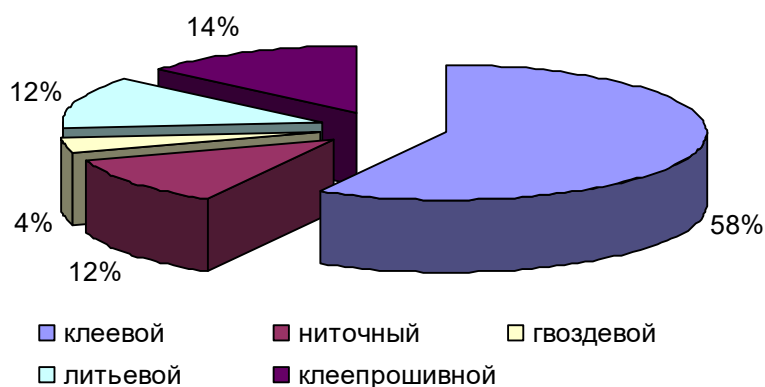


Figure 4- Diagram of the distribution of shoe output by different methods of fastening the bottom of the shoe

Domestically produced goods account for 19% of the volume of all light industry goods sold in the domestic market of the country, the rest is imports, the volumes of which are growing from year to year. Only in the first half of the year, imports of industry goods from non-CIS countries increased by 1.6 times. Add to this the share of goods of official imports - 24%. The rest of the goods - 57% - are illegally imported or illegally produced, the value of which is estimated at more than 800 billion rubles. per year. The losses of the state in this situation with the import of goods from

the shortage of duties and taxes amount to about 200 billion rubles. per year - a huge figure. In addition, this is a huge pressure on the domestic producer, which cannot compete with the product, the price of which is at least 38% lower than the domestic one. There is no need to talk about equal competition in these conditions.

First of all, these are the problems of unjustified importation of the domestic market and an extremely slow reduction in the size of the import of smuggled goods. Despite the measures taken, this huge share of

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imports in the domestic market of the country is almost not decreasing. But the industry is ready to replenish a significant share of mass-market goods that are imported. And we proved this in, when a small trading niche of the duty import of goods by shuttles and other measures allowed us to dramatically increase production volumes, while all the goods were sold. But today this niche has already been exhausted, and it is necessary to quickly make new decisions to give the domestic manufacturer its rightful place in the domestic market. In this situation, we are most concerned about China, which supplies a large share of imported products to our market under gray and black schemes. What should I do? Take advantage of the experience of other countries. For example, the experience of the European Union, which, in order to limit the import of goods from China, concludes "Textile Agreements" with it, determining the size of the import of goods of this nomenclature into its territory. But they went even further, agreeing on the implementation of joint monitoring of Chinese textile exports to Europe, that is, they will track the real volume of supplies. We recently hosted a delegation of Chinese officials. They assured us that they were also interested in the honest, and not smuggled, supply of industry goods to Russia. The Russian-Chinese Chamber for the Promotion of Trade in Machinery, Machinery 2008 and Innovative Products was formed, and it included the Russian Union of Industrialists and Entrepreneurs. This body should also be involved in resolving our issues.

Therefore, we believe that it is necessary to ask the Federal Customs Service, the Ministry of Economic Development, the Ministry of Foreign Affairs and the Ministry of Industry and Energy to take similar actions. Apparently, when we have accurate data on the actual export of goods by groups of foreign economic activity from China, we will be able to use the law on special, protective and anti-dumping measures to protect the market. In addition, we cannot but emphasize that in the conditions of such a large share of exports in the domestic market, which is 81%, it is unreasonable to go down the path of reducing duties on the import of finished goods of the industry. But this is done on shoes, despite the reasoned objections of the industry business. And no matter how much the industry community raises this issue, we are not heard. Today we ask the Russian Union of Industrialists and Entrepreneurs to once again appeal to the Ministry of Economic Development and the Federal Customs Service to reconsider this approach, which will allow the footwear industry to develop, otherwise we may lose the industry. Our point of view is to have high duties on the import of finished goods and low on the import of raw materials and equipment. Protective measures should be applied to those goods that the domestic industry is not able to do. This is world practice. The

state should think about domestic manufacturer and protect it.

We talk a lot about creating a normal, not discriminatory, environment in the domestic market for domestic producers of goods. Therefore, the situation in trade is so important for us. A draft law on trade is being drafted. It is good that a decision has finally been made on such a law. But according to operational information, our problems have not yet been taken into account in the project part-time work of the law. Russian trade should be primarily interested in selling domestic products. This direction is not prescribed. In addition, so far, measures to eliminate discrimination against domestic producers in large retail chains are also not visible. The Russian market is not protected from receipts of not only low-quality goods, but even dangerous goods, in particular, in the children's assortment, linen group, toys. There is no service that can identify such products and block their access to the market. How can the arrival of such goods from abroad be stopped? In these circumstances, it seems necessary to revive the service for monitoring the safety and quality of products or to entrust these functions to existing departments.

Industry experiences unequal competition in the trade of its goods, since all profits from trade margins go only to trade, and industry does not get. And these markups bring profits that exceed the profits of the industry by 100, and in some cases 300 times. (In our industry, there is also a wide variation in consumption prices and production prices, for example, by footwear. - 2.45 times, chintz - 2.4 times, shirts - 1.85 times, children's shoes - 2.2 times and similarly but for other types of products the consumption price exceeds the price of producers.) But we don't have the right to use separate regulators to distribute excess profits. And even the developed world has such regulators. For example, Japan limits the upper limit of the trade margin. In a number of countries, premiums are distributed proportionally between trade and producers on the basis of appropriate agreements.

The problem of creating a normal transparent civilized market and protecting it, creating a system of checks and balances to adjust the situation in this market, creating equal competitive conditions for producers, importers and trade is a complex long-term comprehensive work. In our opinion, we need a special comprehensive program to organize a civilized domestic market for non-food products. We need to create such a programme, but this can only be done in the context of coordinated work by many federal ministries and agencies, industry business and trade.

Moreover, this is especially important in the conditions of the WTO. Measures in this direction should be as follows.

First, it is necessary to understand what our domestic market of goods of the industry is, and for this it is necessary to conduct monitoring.

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Secondly, to isolate which products should be worked with in the first place, and for this to link information about own production and real imports.

And, thirdly, to predict and monitor the effectiveness of the decisions made.

It would be advisable to create a targeted coordination group to develop a program to protect the consumer market of light and textile goods, including regional representatives. I would like the Duma not to "talk down" this problem when the law on the consumer market is adopted. Moreover, such a share of imports (80% of the volume of sales of goods) exceeds the threshold values of the country's economic security and testifies to the need to take measures to protect this market and ensure its transparency and civility, since the task of the state is to create general favorable stimulating conditions for the activities of market entities - national firms - in order to significantly increase their ability to increase the export of goods, on the one hand, and stability in relation to imports, on the other.

In solving this issue, the role of trade and the law, which should regulate its activities, is great. In addition, it is necessary to ensure a level of prices and tariffs that would guarantee both the producer and trade not only the reimbursement of reasonable costs, but also the accumulation of funds for the development of production. It should be noted the positive progress in terms of improving domestic trade, the measures that are planned by the Government of the Russian Federation in this matter, and, first of all, the development of the law "On State Regulation of Trade Activities", the creation of a special department in the Ministry of Economic Development of the Russian Federation. Public organizations and businesses of the textile and light industry are closely following the discussion of the draft law "On the Basics of State Regulation of Trade Activities in the Russian Federation" developed by the Ministry of Economic Development of Russia.

For light industry enterprises, which supply products mainly to the domestic market, the issues of its transparency, the establishment of fair rules of the "game" of market participants, equal access to the market of domestic and foreign producers, the elimination of unequal competition of its participants are very important and directly affect the results of the industry business. It seems to us that a significant aspect of the state's trade activity is the sale of products of the domestic processing industry as a stable channel for constant filling of the budget, ensuring employment of the population, the effective functioning of domestic business, as well as for maintaining the conditions for the qualification growth of workers and preserving the traditional centuries-old national industrial knowledge. relevant for food and light industry.

For domestic suppliers, these are the material and financial conditions for the access of suppliers of

domestic products to work with retail trade. These requirements should be the same for all suppliers of products to the domestic market. Today, large retail chains put forward demands for the supply of products without prepayment, restrictions on admission to delivery without payment of special fees and other bonuses, which are essentially compensation for part of the costs of trade, requirements for a minimum limit on supply prices and their unification by region, 100% return of unsold products and other discriminatory requirements. The regulation of these issues is not reflected either in the draft law or in the action plans to address the problem of improving domestic trade in general.

At the same time, foreign countries (Japan, China), working in the conditions of the WTO, allow themselves to set the maximum size of trade margins, as well as to limit the admission of large retail chains to their markets without burdening them with obligations to have on their shelves a certain share of domestically produced products, the withdrawal of super-profits received from the use of wined trade margins. In our Russian conditions, the gap in prices of producers and sellers of certain groups of light industry products diverges at times (from 2 to 4 times). Thus, not only the consumer suffers due to the increase in prices, but also all the profits received mainly remain in trade, while producers, working at the lower limit of profitability, do not have the means to develop production and increase the competitiveness of their products. Such a discriminatory distribution of profits leads to the monopoly dictate of sellers and seriously hinders the development of the domestic processing industry. It is necessary:

1. To determine as one of the goals of the new law the obligation of domestic trade not only to ensure the satisfaction of the needs of consumers of products, but also to provide favorable conditions for the sale of products of domestic production, the mandatory availability of these products on the shelves and to create conditions for equal admission to the shelves of both domestic suppliers and importers.

2. Provide in the law or other regulatory documents:

- mandatory minimum amount of prepayment when concluding supply contracts;
- the maximum limited period of payment for the delivered products (no more than 45 days);
- prohibition of requirements to stimulate the seller with special "bonuses";
- a mandatory condition for the prohibition on the attribution of all costs for advertising, placement on the shelves, accounting for products in trade to the seller;
- impose penalties for violations of these rules;

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– determine that manufacturers of products have a priority right in the conclusion of supply contracts.

3. Support the proposals of the Ministry of Agriculture of Russia on antimonopoly regulation of trade activities in the following issues:

– The Government of the Russian Federation sets restrictions on the size of the trade margin when selling certain types of products of the textile and light industry of mass consumption (as for agro-industrial products);

– the trade organization is not entitled to return unsold products to the supplier;

– to allow regional authorities to establish the minimum necessary level of availability in network trade organizations of domestically produced products both for textile and light industry goods and for agro-industrial products.

4. To impute to the practice of Rosstat the conduct of periodic monitoring of the state of the domestic market in the context of the most massive types of products of the textile and light industry, in conjunction with imports and own production, which will assess the need to take additional measures to ensure the transparency of the market and the need to protect it.

5. To eliminate the number of dealers, make a decision that wholesale trade enterprises that do not carry out actions with goods, which do not lead to an increase in its added value, are not entitled to establish trade premiums above the minimum level established by the Government of the Russian Federation.

6. Limit the number of wholesale links along the entire path of movement of goods to two. Oblige the supplier to provide all import-export documentation with a customs mark when supplying goods of import origin.

7. To ask the Ministry of Economic Development of the Russian Federation to work out the issue of quotas for the share of imported goods (according to the mass range of textile and light industry products) in retail chains, providing for a progressive increase in taxes with an increase in the established quota.

The Ministry of Economic Development and Trade of the Russian Federation has developed and submitted for discussion a draft Concept for the long-term socio-economic development of Russia until 2025, but, unfortunately, the document prepared by the Ministry of Economic Development and Trade of the Russian Federation, along with many serious studies, lacks a holistic concept of state policy aimed at the development of the country's industry, which would ensure Russia's breakthrough in numbers, highly developed post-industrial powers and a decent standard of living of the population. This is possible if the components of the development strategy of Russia until 2025 are implemented, namely:

– to develop and legislatively consolidate the foundations of an effective state industrial policy as a system of coordinated goals, priorities and actions of state bodies, business and science to improve the efficiency of industry, ensure high competitiveness of products, goods and services and steady growth in production. When it is formed, it is possible to provide for outstripping growth in all sectors of high-tech products with an increase in its share in the total volume of industrial production by 2025 of at least 50%, the equality of subjects of industrial policy, guarantees of property rights;

– ensuring the implementation of special measures to support priority high-tech industries (growth points), such as the aviation industry and engine building, rocket and space, radio-electronic, shipbuilding, nuclear energy, information and communication, to create conditions for the effective development of the entire industry of Russia. In order to increase the volume of investments, create economic and legal prerequisites for the introduction and use of high technologies and new materials, primarily developed in Russia: to legislatively consolidate the foundations of the national innovation system in the Russian Federation; establish an increasing factor for R&D expenditure included in the cost price; reduce VAT to 12%; exempt from taxation the profits of enterprises invested in production; to create institutions of long-term lending for modernization and technical re-equipment of industry at a low percentage; to improve the system of VAT administration, to change the procedure and terms of payment of taxes for the replenishment of industrial enterprises of their own working capital; make the transition to a differentiated rate of tax on the extraction of minerals depending on the natural conditions, degree of production and deposits, etc.; to develop and implement measures to combat price monopoly, to stabilize tariffs for services of natural monopolies, to prepare and adopt a federal law "On Pricing and Tariff Policy"; to promote the creation and promotion of domestic national, regional and corporate brands of domestic products; in order to create competitive products, ensure the introduction of quality systems, promote the implementation of programs aimed at identifying, independently assessing the quality and promotion of domestic products, intensify standardization work, including the cost of research in this area to develop new and adjust existing national standards; for creation of conditions for the mass introduction of advanced technologies and equipment to normatively consolidate the transition from the approval regime to the declarative one in most cases, with the exception of those necessary to ensure the security of citizens and the country;

– Taking into account that mechanical engineering is a system-forming complex, to ensure its modernization and restoration of the technological

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basis of the national machine-building complex - machine-tool building in a short time. For these purposes, to use both domestic developments and the purchase of foreign equipment and technologies, using the international division of labor, to make wider use of the leasing mechanism. In addition to general measures to support industry, it is necessary to additionally prepare and adopt a state strategy for the development of the machine-tool industry for the period up to ., including the implementation of special targeted programs aimed at financing promising scientific developments; modify the size and procedure for collecting customs duties to stimulate the import of the latest technological equipment while promoting the revival of domestic production of such equipment, in particular, to abolish customs duties and VAT on the import of new imported technological equipment not produced in the country; to develop and adopt a set of special measures to provide mechanical engineering and machine tool building with scientific and engineering personnel, highly qualified workers, especially in the field of scientific research and applied development, to form a system of employment for young specialists; develop and adopt amendments to the Tax Code (Chapter 25) establishing regimes of accelerated depreciation and preferences (premiums), allowing to amortize the active part of fixed assets in an amount exceeding their book value; take measures to stimulate the system of state and commercial leasing of technological equipment in order to technically re-equip the engineering industries; consider the possibility of preliminary 100% payment from the federal budget of the cost of supplying enterprises with unique imported equipment, including on a leasing basis, necessary for the purpose of technical re-equipment of mechanical engineering and machine tool building; to introduce into practice a systematic all-Russian census of metalworking equipment, which will allow to have objective data on the state of the machine park of machine-building enterprises; 2020 r

– to develop and implement a set of measures to solve the problem of lack of qualified personnel in industry, to improve the quality of personnel training in higher educational institutions, to provide young specialists with housing on preferential terms, to introduce into practice the training of specialists under the state order, on the basis of private-state partnership to provide vocational schools with modern equipment and dormitories, to allow enterprises to spend money on personnel training attributed to production costs in full, adopt special legislative and regulatory documents aimed at ensuring the industrial development of Siberia and the Far East;

– develop and legislatively consolidate a set of measures that ensure the interest of economic entities in active participation in projects to improve resource and energy efficiency, including elements of monetary policy, currency and investment regulation, subsidy

mechanisms, special tax and depreciation regimes;

– to implement a set of measures aimed at the mass development of small and medium-sized enterprises in the industrial and production, innovative spheres and in the service sector, primarily in terms of providing small and medium-sized enterprises with access to production facilities, purchasing equipment, including on a leasing basis, developing microfinance and credit cooperation;

– take measures to create equal competitive conditions for the Russian processing industry with importers, accelerate the development and adoption of the federal law "On Trade" and related regulatory acts to organize the effective functioning of Russian wholesale and retail trade;

– to develop a strategy for the regional industrial development of the constituent entities of the Russian Federation, including the territorial distribution of productive forces for the long term, to link the development of regional infrastructure with the location of industrial facilities;

– Clearly prescribe a system for implementing the fundamental goals of the state industrial policy, ensuring the solution of systemic problems of the real sector of the economy, correlate the need for investment, sources of investment and realistically achievable socio-economic results.

Once again, I would like to draw attention to the fact that all this will become a reality if one condition is implemented, namely, light industry products will be produced of high quality.

Quality is the oldest value of mankind. And it is in terms of the quality of Russian goods, services, and the quality of management that we are losing in the global competition. Have you seen complex products with the inscription made in Russia anywhere in the world? We have not seen it either, and it is a pity. For a long time we hoped for the global ISO system. Alas, in Russian conditions it has slipped into a crisis. Sorry, dear colleagues from the world of quality certification, but it's time to publicly list what it has become and what almost everyone recognizes among themselves:

– an immense number of documents in which there is no strength to navigate;

– the meaninglessness of many of them (for example, under the conditions of ISO, job descriptions are required, and everyone rushes on the go to throw something, and then forgets them without a trace);

– one entrepreneur once said, "We've been ISO certified." And then he added, "Don't think about it, we were certified by a Norwegian company." You know what it's all about? Yeah, selling certificates. Not everybody sells, of course, but reputation doesn't happen by accident.

So now, you say, not to do quality? No, you just have to understand that the wedge light on ISO didn't agree. Let's agree on terms. Quality is what? Compliance with standards, the majority will answer.

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Of course, where standards are possible, this is true. Although standards have tolerances. And the difference between the upper and lower divisions in these tolerances is significant. And there are also limits to standardization. Say, contact with the client. Everybody knows, that the quality of such contact is critical to the success of the business, when prices, assortment, terms are aligned under the pressure of competition. A certain set of friendly words, dress code, etc. can be considered a standard, although we know well what they cover.

The current fascination with descriptions of business processes is also gradually approaching the absurd. And somewhere it has already reached it: at different firms we already find a rigid description of the interview not only when applying for a job, but even a standard for a meeting and for negotiating. Now there is a different approach: quality is the correspondence to the needs of the client, the user. Whoever buys is the one who evaluates. You just need to understand more precisely what the buyer appreciates. If you get in, here it is, the required quality, that is, the degree of satisfaction of the consumer with the properties of the product. But this approach is limited and stretches back to the last century. Then the formula was considered indisputable: the buyer is always right. In our time, another imperative is much true: the buyer does not know our capabilities.

Where are we going? The understanding of quality as conformity (standard, need) is becoming obsolete. Today, it is becoming much more capacious to understand it as a comparison – with another product or with the same, but the same. Comparison gives the superiority of the product over the product, the service over the service, the specialist over the specialist, the organization over the organization. Comparison with a standard or need does not imply superiority. Only equality is possible there. The standard and the need indicate a minimum. And who needs the minimum? Not many. But superiority is interesting to everyone, because the law of increasing needs is inexorable. In practice, this means switching the quality assessment system to levels. For example:

A. *Sufficient quality* below which the defect is, i.e. the minimum permissible, the use of which will not cause damage.

B. *Reference quality* - on the principle of compliance with the standard, i.e. the best of the available. The standard can appear from the standard, but it can serve as any sample: from what we have live in our company, from competitors or at least somewhere in the form known to us.

B. *Avant-garde quality* – what is achieved for the first time exceeds the standards, but can count on solvent demand and profitability immediately or in the future.

That's the vertical of quality. It may allow for more degrees. And one more thing: it's time to

abandon the idea that any quality can be measured. Everything can be evaluated, but little of what is important to us can be measured. Today, there is a problem of high-quality special-purpose shoes, where, just the assessment and measurements go side by side, hand to hand. The potential demand of the domestic market for such shoes is growing from year to year, and increasing the capacity for its production would be justified. Today, its production in Russia is within 14 million pairs per year with a total need of 50–60 million pairs.

The technical level of domestic special-purpose shoes mainly corresponds to similar foreign products. In terms of price parameters, our shoes are close to foreign ones, with the exception of special shoes from China, which have a lower price level. The analysis shows that in some cases both domestic and foreign special shoes do not meet the requirements of operation, for example, in terms of the strength of fastening the bottom of the shoe, the components used materials required by protective properties. The current regulatory and technical documentation for special shoes has 50 GOST, OSTs and a huge number of technical specifications. Most of the regulatory and technical documentation of increasing the specific advantages of domestic products in the Russian Federation should be carried out scientific developments to create new and improve existing types of special-purpose shoes based on modern materials, structures, technologies: for example, such as antistatic shoes: vibration-proof; to protect against aggressive environments and the impact on it of low temperatures in extreme conditions, etc.

In this regard, in the developed program for the strategic development of light industry until 202-5, it would be advisable to include:

- development of the Technical Regulations "On the Safety of Special Purpose Shoes";
- development, revision of changes and additions to the regulatory documentation for special shoes with their simultaneous harmonization with international standards;
- development of changes and additions to the regulatory documentation for test methods, measurements and evaluation of the domestic range of special-purpose shoes;
- development of national standards for the entire range of special-purpose footwear;
- adjustment of the legal framework in the field of standardization and certification of special footwear in order to bring it into line with the Federal Law "On Technical Regulation" and the adopted amendments to it, as well as international norms and rules;
- establishment of an internationally accredited national center for certification and testing of special-purpose footwear;

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– conducting R&D to create new and improve existing technologies for the production of special-purpose shoes in order to ensure their competitiveness both in domestic and foreign markets;

– to develop a system for monitoring the compliance of imported special-purpose shoes entering the domestic market with domestic regulatory documents, the indicators of properties and quality declared in them.

The need to develop technical regulations for special-purpose footwear is due to the fact that in the domestic market of personal protective equipment, in particular special footwear, Russia is one of the largest consumers of products. Climatic and operational conditions of shoes in Russia differ significantly from the corresponding conditions in most foreign countries: low temperatures, a high level of potential injury hazard of a number of industries with insufficient volume financing of occupational health and safety measures.

Analysis of operational and protective properties, as well as the results of laboratory, including certification tests, shows that there is practically no state control over the implementation of technical requirements, materials used, and special manufacturing technologies. Shoes. In addition, the analysis of the "Norms for the free issuance of personal protective equipment" of a number of the largest enterprises showed that there are no well-formulated requirements for the protective properties of special forces. shoes, which leads to the operation of this type of shoes that do not correspond to their intended purpose and do not provide the necessary level of protection. The same can be said about the comfort of the specialists. Shoes. Simultaneously with the creation of technical regulations, national standards for all types of special-purpose shoes should be developed.

An integral part of the implementation of the technical regulation system is the certification tests of both domestic and imported special-purpose shoes, which will eliminate the receipt of low-quality products to consumers, and improve the overall technical level of the products. To this end, it is advisable to create a national "Center for Certification of Special Purpose Shoes" accredited according to Russian and international requirements, equipped with modern devices and equipment.

The implementation of the proposed measures will allow:

- create a new regulatory framework for special footwear;
- increase the competitiveness of products;
- to increase the volume of production of special-purpose shoes in the Russian Federation;
- provide workers with shoes with high protective properties;

– improve the health and working conditions of workers in various professions and industries;

– clarify the norms of free issuance of special. shoes, adjusting the requirements for it in accordance with modern conditions.

In the new economic conditions, only such production that actively and dynamically responds to emerging tasks is progressive. The principle "to produce only what is needed, when it is needed, and as much as necessary" requires the adaptation of shoe enterprises to the conditions of production in small batches with frequent changes in the range of shoes, i.e. to the conditions of a lot of assortment small-scale production. The efficiency of the shoe enterprise, and in many respects the ability to survive in the competitive struggle, depend on the ability to adjust to the production of shoes in a short time and with minimal costs in accordance with fluctuations in demand. The development and implementation of flexible production systems opens up great opportunities for this. Technological and organizational flexibility of production systems determines the variable potential of enterprises, their ability to respond quickly and adequately to changes in market conditions and acts as a mechanism for optimizing the structure of the technological system in order to reduce the cost of footwear. Thus, the development of flexible technological processes for the production of leather goods provides high efficiency with a large assortment of footwear production and will provoke a sharp increase in demand for the products of shoe enterprises of the Southern Federal District and the North Caucasus Federal District.

If customer satisfaction is formed at the expense of the level of the manufacturer, i.e. his test level is formed by the affordability of the goods that are offered by the assortment range, of course, quality, and at the expense of the level of the consumer, i.e. his level of service presupposes the presence of a culture of customer service, the attractor The respondents who took part in the product's satisfaction, customer satisfaction, and, of course, the solvency of the consumers themselves believe that consumersatisfaction will be ensured with the reliabilityof the product, itsaffordability, the ability of buyers to makepurchases, i.e. their solvency. According to the design decision, i.e. to comply with fashion, the products must have a sufficiently long warranty period, and interestingly, all respondents are unanimous in that manufacturers fight for the respectful attitude ofcustomers to them, to wintheir trust and desire to make a purchase of the products of these enterprises, i.e. the brand and image remain in demand always, which together decides the main one for dacha - provides consumers with domestic products as part of import substitution.

The criteria for assessing the competitiveness of a light industry enterprise with the help of the software

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developed by the authors for the first time made it possible to formalize the role of expert respondents on the basis of their competence to the problem under consideration. The need for such an approach is due to the desire to have an objective assessment of competence, taking into account not only the opinion of the invited party of expert respondents to participate in the survey, but also with the help of an evaluation criterion - the concordation coefficient (W) - the value of which varies from 0 to 1. And if $W = 0-0.5$ - then this is their lack of consistency with the opinion of those experts whose concordation coefficient (W) value tends to 1, which confirms their high competence and the possibility of their further participation as expert respondents. To assess the effectiveness of the production activities of the shoe enterprise, it is necessary to analyze the annual results of the enterprise for the production of men's and women's assortment of shoes.

These calculations indicate that with 100% sales 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 3697.4 thousand rubles remains. The profitability of products is 14.9%. Table 1 shows the annual results of the shoe enterprise for the production of men's and women's assortment of shoes. Most often, the company sells shoes through stores with payment after sale, concluding contracts with trade indicating the timing of receipt of funds to the manufacturer's accounts. In this case, if the shoes are in demand and are sold in full, the company receives money on time, which is also necessary for the payment of wages, the purchase of working capital and other resources to ensure the development of production.

During the year, the company produces 327903 pairs of shoes. With 100% sales of these products, the company will receive revenue in the amount of 392202.1 thousand rubles. For example, when selling autumn half-ankle boots in the amount of 80% of the production volume, the profit is reduced by 43.15% and is only 1178 thousand rubles, the sale of shoes less than 47.4% of the production volume brings losses to the enterprise. Due to the lack of funds, it is necessary to reduce the volume of production, delay the payment of wages to workers, for which at present the managers of the enterprise can be held liable, even to criminal. In the event of such a situation, it is necessary to attract borrowed funds to cover costs and organize subsequent output, which at the moment is associated with certain difficulties: interest on the loan has been significantly increased (up to 18%), the loan repayment period has been reduced, etc., leading to an even greater increase in production costs.

Shoe enterprises should focus both on external (consumer enterprises, competition, market situation, etc.) and on internal factors, such as sales volume, profitability, coverage of basic costs, etc. However, it is impossible to take into account and foresee all the

situations that may arise when selling shoes, i.e. some models of shoes at a certain stage are no longer in demand. In this case, another, usually unpublished side of marketing should appear: if 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 residues, attract a large number of consumers, stimulate the consumption of shoes, using discounts for this. There are about twenty varieties of discounts, but for shoes the most common are such types of discounts that are used at various levels of the enterprise, sales organizations, trade. In addition to the use of discounts, the company can take an initiative to reduce the price when underutilizing production capacities, reducing market share under the onslaught of competition from competing enterprises, etc. In this case, the company 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, contributes to increasing the 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 are reduced, 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 of consumers.

The developed software allows the head of the enterprise not only to daily track the receipt of cash, but most importantly, to predict the replacement of one model, the demand for which has decreased to a critical volume, when it is not possible to obtain funds to cover the production costs associated with this model, and the transition to the production of a new model, the demand for which, based on the analysis of the marketing service, as it were, guarantees its viability and demand in an amount 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 provision for this very demand for a new model, namely:

- prepaid delivery contracts with consumers;
- guarantee of branded stores that during the trial sale of models caused demand and there is their demand within the volumes at which the return of funds spent on their launch will be ensured and profit will be ensured, which will ensure the enterprise obtaining high TEP and stability in the formation and provision of the consumer with competitive and popular products (Table 1).

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Thus, taking into account the software for tracking the movement of cash flow and the presence of a well-established 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 labor collective from bankruptcy.

Of course, all this is only 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 version of the break-even point construction provides an understanding that the output volume of this model cannot be less than a certain number of pairs of this model.

Table 1. Resource requirements by component
Annual results of the shoe enterprise for the production of men's and women's shoes

Indicators	Jan.	Feb.	March	Apr	May	June	July	Aug	Sen	Oct	Novab	Dec.
Sales volume, steam	26114	26114	29661	29661	29661	28168	28168	28168	25358	25358	25358	26114
Proceeds from sales, 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 of production, 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
Profitability of products, %	16,8	16,8	14,9	14,9	14,9	15,2	15,2	15,2	15,9	15,9	15,9	16,8

The shoe market of the Southern Federal District and the North Caucasus Federal District is overly saturated with types of shoes for the same purpose. Therefore, the head of the enterprise needs to know exactly what will be in demand on the market and how it should be implemented so that the developed range

of shoes is chosen by the buyer, withstanding the fiercest competition that generates new offers.

For all this, it is important to build an assortment policy in such a way that the market, if shoes of the same type arrive, they must differ significantly in price, but meet the requirements of the standard.

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The most important task of building elements of the operational management system of the assortment of a shoe enterprise is the choice of technology that can effectively implement the intended goals in the conditions of a complex multi-level hierarchical management system. The use of mathematical methods and optimization theory allows you to effectively make decisions not only in those conditions when the parameters of the system are known, or they can be represented in the form of fixed values.

The paper proposes new approaches to determining the total number of shoes produced, depending on the situation on the market, prevailing prices and demand and the development of an optimal plan for the production of shoe models.

To determine the total number of shoes produced, depending on the situation on the market, current prices and demand, it is proposed to apply elements of the theory of blurred sets. The theory of blurred sets has long been used mainly for use in systems that mimic human behavior, such as pattern recognition, linguistic analysis, solution search and others, in which there is no access to the complex mathematical apparatus necessary to describe complex production control systems and are highly specialized systems. This approach allows in each case to agree on the requirements of the problem and the necessary degree of accuracy of its solution.

Methods based on the provisions of the theory of blurred sets make it possible to use approximate, but at the same time having a sufficient degree of efficiency, methods of describing non-deterministic systems, for the analysis of which it is impossible to use standard quantitative mathematical methods. At the same time, all the theoretical justifications for this approach are quite accurate and are not in themselves a source of uncertainty (fuzzy logic and IP).

Unlike traditional mathematics, which requires precise and unambiguous formulations of patterns at every step of modeling, fuzzy logic offers a completely different level of thinking, thanks to which the creative process of modeling occurs at the highest level of abstraction, in which only a minimal set of patterns is postulated.

The basic idea of fuzzy logic is that you can't define rules for all occasions. These rules are discrete points in the continuum of possible situations and decisions are made by approximating them. For each case, well-known rules for such situations are combined. This approximation is possible only in cases where there is flexibility or vagueness in the words by which these rules are defined. To use the capabilities of human logic in production processes, a mathematical model is needed. To implement such a model, fuzzy logic was developed that allows you to describe the process of decision-making and its search in an algorithmic form.

When solving problems that contain fuzziness in their formulation and have vague goals (multi-criteria "maximum income with minimum costs", it is possible to operate with fuzzy input data, namely:

- continuously changing values in time (dynamic tasks);
- values that cannot be set unambiguously (results of statistical surveys, advertising campaigns, etc.).

There is a possibility of fuzzy formalization of evaluation and comparison criteria: operating with the criteria of "majority", "possible", "predominantly", etc.; the ability to conduct rapid modeling of complex dynamical systems and their comparative analysis with a given degree of accuracy. Operating with the principles of system behavior described by fuzzy-methods, it does not take much time to find out the exact values of variables, compile describing equations and evaluate different variants of output values.

The developed system allows you to build a control model with an unlimited number of input parameters and control units and thereby describe the behavior of fairly complex control objects.

Consider the construction of elements of a fuzzy expert system. The control algorithm is implemented programmatically using the MATLAB extension package – Fuzzy Logic Toolbox; the assessment of the planned production of shoes is made according to the standards for removing shoes from the area of the shoe assembly site and ranges from 0 to 2.8 pairs / m²; the price of shoes, demand and market saturation are estimated from 0 to 1 (0 is the worst estimate, 1 is the best).

The developed system has three inputs and one output. Based on established customs and intuitive ideas, let's assume that the task of finding the optimal release is described by the following assumptions:

1. If the demand is low, the price is high and the saturation of the market is high, the assortment requires updating and the output is reduced to 20-50% of the normative.
2. If the demand is average, the price is average and the saturation of the market is average, the assortment requires some modification and the output is up to 40-70% of the normative.
3. If the demand is high, the price is low and the saturation of the market is low, the assortment does not require changes and the output is up to 60-100% of the normative.

The construction of this system is carried out using the Mandani output algorithm.

The structure of the expert system and the resulting set of rules are shown in Figures 5 - 6.

The logical conclusion of any case (Figure 5) is carried out in four stages: the introduction of fuzziness (phasification), logical conclusion, composition, bringing to clarity - defuzzification (defuzzification).

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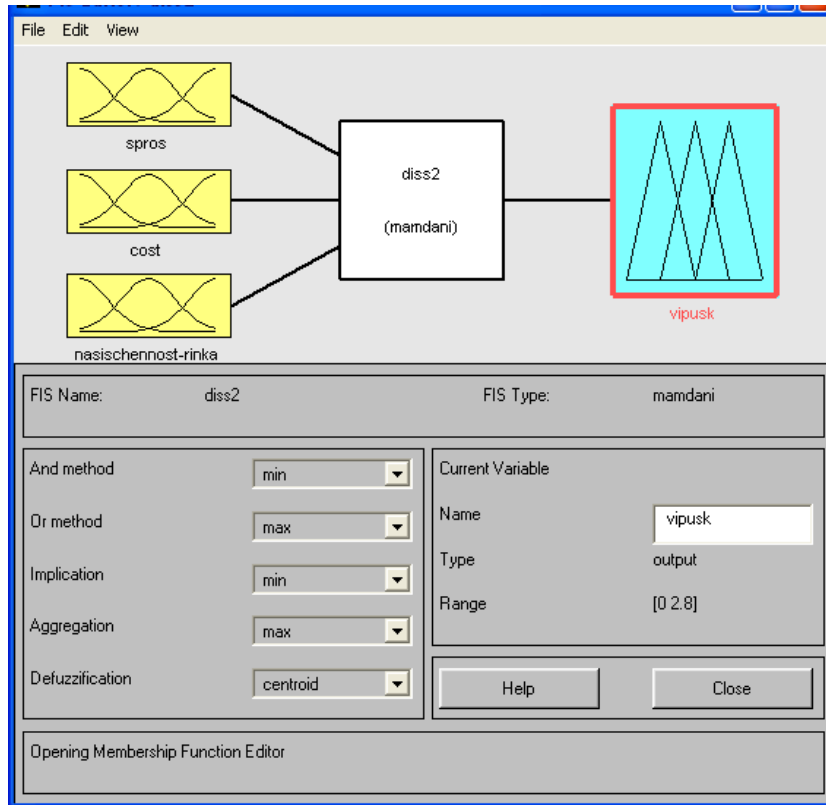


Figure 5 - Structure of the expert system

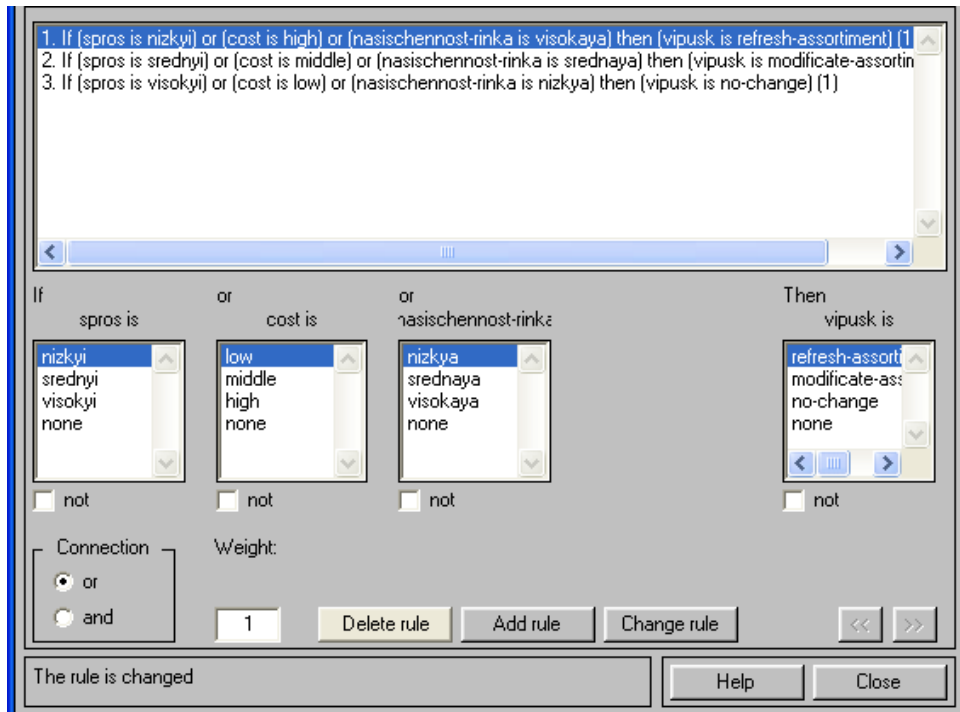


Figure 6 - Final Rule Set

For greater reliability of the results obtained when optimizing the total number of shoes produced, depending on the situation on the market, prevailing

prices and demand, using modern mathematical methods, it is necessary to build a geometric image of

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the process under study and choose the most rational solution for production volumes (Figures 7 -10).

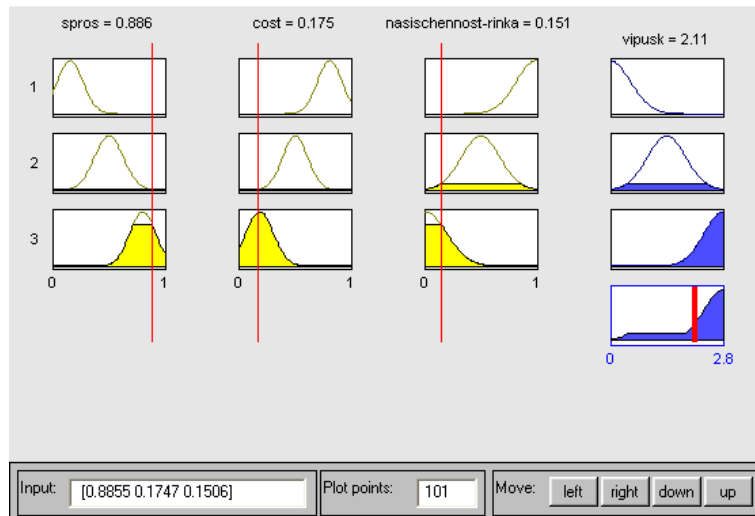


Figure 7- Mandani inference procedure (high demand $S=0,886$, low price $C=0,175$, market saturation low $N=0.151$, estimated output – 2,11 pairs/m2)

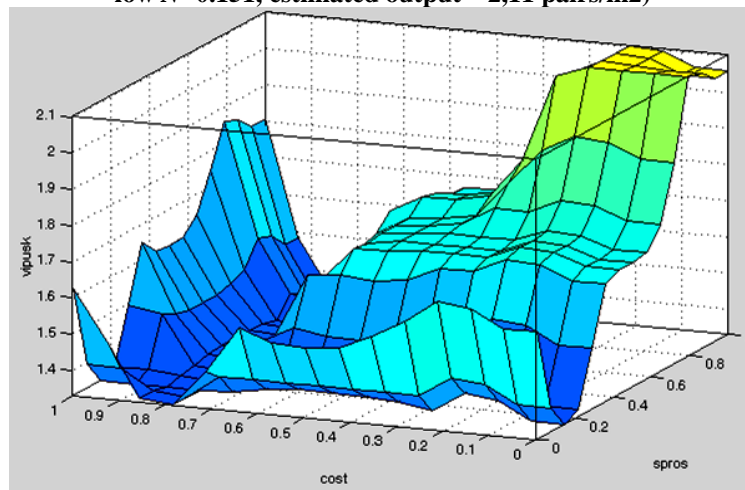


Figure 8 - Geometric image of the dependence of the estimated output from demand and price at a fixed variable "market saturation" $N = 0.151$

The constructed geometric image of three factors with a fixed value of one factor makes it possible to establish the influence on the output volume of the other two factors and to choose an extreme ratio between the number of shoes produced and the value of the factors of price, demand and saturation of the market within the permissible price and marketing

restrictions.

So, in order to achieve the maximum value of the volume of footwear production with a fixed saturation of the market at a low level, the enterprise needs to achieve high demand for products and reduce its cost by regulating pricing.

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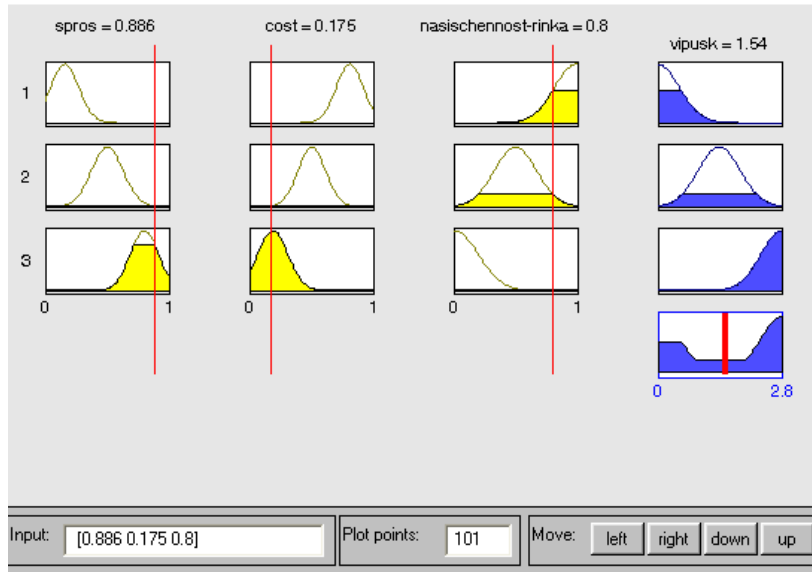


Figure 9 - Mandani inference procedure
 (high demand $S=0.886$, low price $C=0.175$, market saturation is high $N=0.8$, estimated output – 1.54 pairs/m²)

With high market saturation, the maximum production volume is at around 1.4-1.5 pairs/m² and can be regulated by the introduction of new types of shoes into production. With high cost and low demand

for manufactured models, consideration should be given to reducing production costs by updating the design and using new materials.

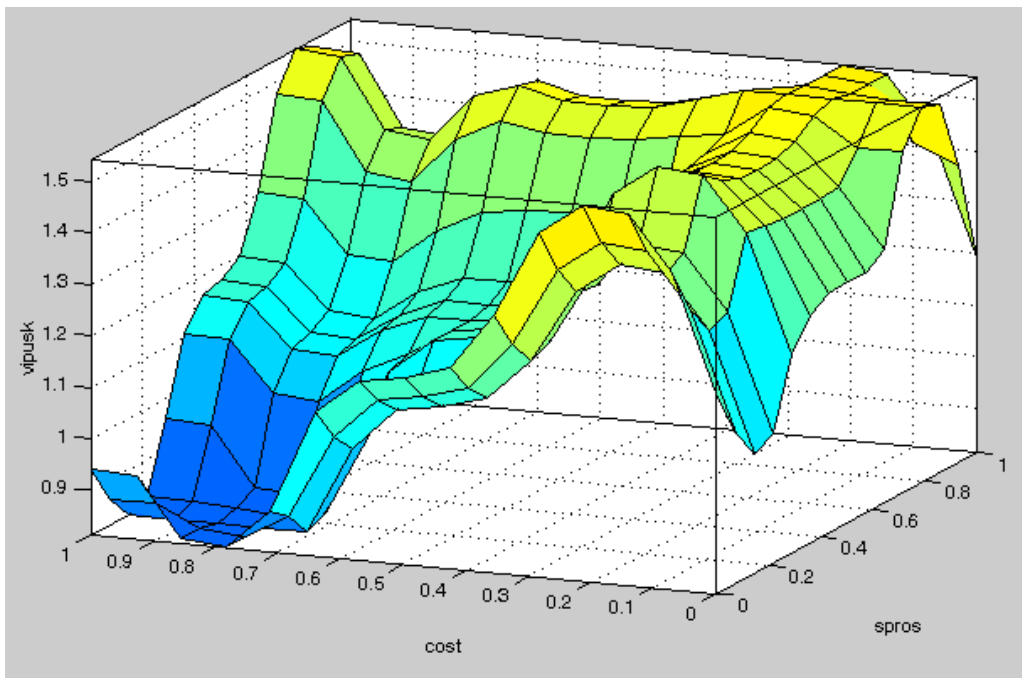


Figure 10- Geometric image of the dependence of the calculated output from demand and price at a fixed variable "market saturation" $N = 0.8$

Defining a production plan in order to maximize profit from the sale of manufactured products is a linear programming task and is solved using the "Solution Search" option in Microsoft® Excel.

The development of the optimal plan for the production of shoe models is carried out on the basis of taking into account the profitability coefficient and production costs of specific models that occupy the largest share in the cost of production and are

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conditionally variable costs. These include the following costs:

- costs of raw materials and basic materials;
- costs of auxiliary materials;
- costs of basic and additional wages of production workers with deductions for a single social tax.

The software developed by the authors guarantees manufacturers to form the manufacture of an assortment of shoes, which will be in full demand and provide enterprises with stable fuel and energy systems.

Conclusion

But with a lot of assortment production, the number of pairs produced is formed by its demand and if the demand does not ensure its sale in the amount that provides the enterprise with the return of all the funds spent on this model, in this case, the manager must decide on the feasibility 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 within what time it is necessary to replace it with a new one, so that the return of these funds is ensured in full and with a profit. To ensure the formulated tasks, the following measures were implemented, namely:

1. An assortment policy has been developed for the formation of competitive men's, women's and children's shoes, taking into account the factors affecting consumer demand: compliance with the main fashion trends, economic, social and climatic features 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 the demand of the elite consumer, using manual labor create the basis for meeting the demand for shoes for buyer of these regions.

2. Innovative technological processes have been developed 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 shoes and providing them with an increase in competitiveness with the products of leading foreign companies, with the possibility of a wide range of products of shoes not only in types, but also in methods of fastening, which guarantees its demand in full.

3. Layouts of technological equipment are 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 optimal power from the production area and the form of production organization.

4. Software has been developed for calculating the receipt of cash from the operating activities of shoe enterprises on the basis of 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 and developing measures for their development, which are aimed at accelerating the turnover of products and reducing losses, which guarantees enterprises to obtain stable fuel and energy reserves and warns them of bankruptcy.

5. Software has been developed for the formation of the technological process of assembling shoes and determining the cost of production of the range of shoes. A computer simulation model describing the dynamics of the process of assembling shoes is implemented. The proposed methodology and the software implemented on this basis make it possible to reduce the duration of technological preparation of production and increase, due to the rationalization of the technological process, the specific consumer effect of shoes.

6. Complex indicators of the efficiency of innovative technological processes of shoe manufacturing are calculated. Taking into account the production program, promising options for technology and equipment were formed, the most effective one was chosen; the possibilities of streamlining the flow are revealed, allowing to eliminate "bottlenecks", minimize equipment downtime, which is one of the conditions for designing innovative technological processes. The reliability of the calculations carried out to assess the efficiency of technological processes by targeted programming methods for various technological and organizational solutions is confirmed by calculations of economic efficiency indicators: cost, profit and profitability, etc.

7. The proposed methodology 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 conducted research is expressed in the intellectualization of the work of the technologist with a reduction in the time spent on the development of the range of shoes produced and the assessment of the effectiveness of technological processes in comparison with the typical economic calculation of the full cost of shoe manufacturing.

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

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9. 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 range of shoe clusters equipped with universal, highly efficient and multifunctional equipment.

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

11. Proposals for the creation of a testing laboratory within the cluster, in which it is planned to conduct tests of shoes to verify its compliance with the quality and safety indicators established in regulatory documents, have been substantiated.

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

13. Measures have been developed to test and assess the quality and safety of shoes.

In addition, logic shows that the task of creating in the country its own raw material base for the development of the light industry should be a priority. Technical and technological equipment, personnel training should be carried out in the context of it. Of course, all the actions presented are interrelated. The base will have to be built and improved by specialists, without modern equipment and technologies it will not be possible to provide production with raw materials. Clusters will remain good dreams without a balanced system. construction of the direction in the economy, which someone mockingly called "light" industry. Light industry is waiting for hard years, but in Russia "hard" and "successfully" have always been in the same harness. And we harnessed for a long time, as N.V. Gogol emphasized, which, in addition, did not prevent Europe from being saved from fascism for half a century, and helping Asia and Africa to overthrow colonial rulers, and build a second economy in the world.

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